

ICI OPERATIONS

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# Mutual Fund Operations Planning Guide for an Unexpected Market Close

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# Mutual Fund Operations Planning Guide for an Unexpected Market Close

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## Purpose

This planning guide for unexpected market closure (UMC) events highlights processing considerations and common industry practices for fund operations staff and other industry stakeholders to assist in the development of comprehensive business continuity plans. Each mutual fund should assess whether its normal processing capabilities could be affected during a UMC event as part of its ongoing business continuity planning efforts. This assessment should include a review of systems, resources, and business partners, as well as industry practices, to determine the activities that could require systems enhancements or implementation of exception processing routines during certain disruption scenarios. Disruptions to normal mutual fund processing due to any UMC require that mutual funds, intermediaries, service providers, and the Depository Trust & Clearing Corporation (DTCC)<sup>1</sup> implement distinct processing routines to minimize effects on mutual fund shareholder processing activities.

**NOTE:** This document is intended for fund operations professionals. As such, the technical details might not be familiar to some readers. Where possible, external references and definitions are provided.

## Introduction

During Hurricane Sandy in October 2012, ICI engaged with Institute members, intermediaries, service providers, and the DTCC to discuss operational issues and processing needs that were confronting the industry. These discussions highlighted a variety of issues that require special consideration when normal market activity is disrupted. To address these and future concerns, members of ICI's Broker/Dealer Advisory Committee (BDAC) and Bank, Trust, and Retirement Advisory Committee (BTRAC) formed the Operations Response Task Force (ORTF).<sup>2</sup> The ORTF's goal is to develop common practices for industry participants that can be used to improve operational processing as part of business continuity planning for future events.

The Institute's Transfer Agent Advisory Committee (TAAC) also engaged its Unscheduled Market Close Task Force (UMCTF) after Hurricane Sandy. The group was tasked with updating transfer agent documentation established and shared with the industry in 2008, following a UMC due to a presidential day of mourning.

Both the ORTF and the UMCTF conducted conference calls and meetings, beginning in December 2012 and continuing throughout 2013, to develop and update documentation to aid industry stakeholders with operational issues during UMC events and lessons learned during Hurricane Sandy.

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<sup>1</sup> As the securities industry utility, DTCC's subsidiary—the National Securities Clearing Corporation (NSCC)—provides critical services for trading and settlement (Fund/SERV®) and data exchange (Networking), which facilitate automated processing between mutual funds and intermediaries.

<sup>2</sup> Originally called the Business Continuity Planning Steering Committee (BCPSC), it was renamed in 2016 to avoid confusion with the ICI Technology Committee's business continuity subcommittee.

The efforts of the ORTF and UMCTF resulted in this guide, first published in 2014 and now revised in 2019. The guide is for fund companies that are (1) evaluating a course of action for processing and procedures in response to a UMC and (2) communicating information to shareholders, intermediaries, and other business partners about fund processing plans during a UMC event. The guide provides useful information about these topics:

- » Specific UMC scenarios
- » Key variables for assessing an event's impact and related industry practices
- » Critical considerations for determining a fund's status (e.g., open or closed) during a UMC event
- » Communications to shareholders, service providers, and intermediaries
- » Operational considerations for net asset value (NAV) delivery, dividend/accrual activity, daily processing output/file transmissions, transfers, settlement and money movement, and transaction processing
- » Additional resources to aid in planning and executing procedures during a UMC event, including assessment checklists to evaluate effects and aid corresponding decisionmaking, as well as charts that highlight key operational flows that should be considered

The ORTF members will coordinate the industry's operational response to UMC events. When a UMC event occurs, the ORTF will assess the status of markets, exchanges, the banking system, and the National Securities Clearing Corporation (NSCC) to determine the parameters and potential effects. ICI will facilitate and organize task force, committee, and industry conference calls to promote industry understanding of the effects and to foster ongoing communication among funds, intermediaries, and service providers before (if possible), during, and after the event.

The ORTF and the TAAC's UMCTF have incorporated numerous changes to this second publication of the guide; changes are summarized in Appendix G. The ORTF will update the guide as circumstances and experiences warrant.

## UMC Background and Scenarios

For this document, a UMC event occurs when one or more markets and/or exchanges close on what is expected to be a business day. Some UMC events occur with enough advance notice that they could be considered “anticipated” (e.g., a presidential day of mourning); others occur with little or no notice and thus are “unanticipated” (terrorist attacks on September 11, 2001; Hurricane Sandy in October 2012).

Anticipated or unanticipated, UMC events alter “business as usual” as funds will need to adjust both internal and external processes and procedures, as well as interactions with intermediaries and other business partners.

The scope and operational impact of a UMC event are influenced by a number of variables. These are the primary factors that affect fund industry processing as it relates to UMC events:

- » Which markets or exchanges are open and which are closed
- » Whether the Federal Reserve System is available for money movement
- » Whether the DTCC/NSCC is open or closed

Figure 1 presents various combinations of these factors (for markets, the Federal Reserve, and NSCC-related activities) from “business as usual” through full closure.<sup>3</sup> This document is focused on the last three event scenarios where the markets (represented by the New York Stock Exchange [NYSE]) are closed.

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<sup>3</sup> As noted in Figure 1, a holiday can be considered a form of “expected market close” and can provide some helpful context in assessing the effects of a UMC. However, because a holiday is prescheduled, industry stakeholders implement predetermined procedures before and on the holiday to mitigate any impact. The response during a UMC event will most certainly differ in scope and will require more effort.

**FIGURE 1**  
**Event Scenarios for Markets, Banks, and the DTCC/NSCC**

Markets and banks			DTCC/NSCC activities <sup>1</sup>			
NYSE <sup>2</sup>	Federal Reserve <sup>3</sup>	Type of event	Current day trades	Valid prior-day trades (i.e., DCC&S) <sup>4</sup>	Cash settlement	Networking <sup>5</sup>
Open	Open	Business as usual	Yes	Yes	Yes	Yes
Open	Closed	Scheduled holiday (e.g., Columbus Day and Veterans Day)	Yes	Yes	No	Yes
Closed	Open	Scheduled holiday (e.g., Good Friday)	No	No	No	No
Closed	Closed	Scheduled holiday (e.g., New Year's, Christmas)	No	No	No	No
Closed	Open	Unscheduled closing	No <sup>6</sup>	Yes <sup>7</sup>	Yes	Yes

<sup>1</sup> The trading activities listed in the figure are specific to the National Securities Clearing Corporation (NSCC). Funds and intermediaries may use trading networks other than the NSCC. Such networks may provide combinations of support for activities during a UMC event that differ from those listed in the figure.

<sup>2</sup> The New York Stock Exchange (NYSE) typically is the exchange referenced in fund prospectuses to determine a fund's open or closed status. However, any exchange (e.g., National Association of Securities Dealers Automated Quotations [NASDAQ] stock exchange) or market (e.g., the bond market, which is not a specific exchange but is considered open when there is active trading between counterparties) could be cited in a prospectus when defining a fund's open or closed status.

<sup>3</sup> The Federal Reserve System (Federal Reserve) has 12 districts. DTCC money movement is completed through the Federal Reserve Bank of New York, which is part of the Second Federal Reserve District.

<sup>4</sup> Defined Contribution Clearance & Settlement (DCC&S) service automates and simplifies the key processes involved in completing transactions for defined contribution and other retirement plans.

<sup>5</sup> Networking is the NSCC service for account reconciliation and dividend processing between fund companies and intermediaries.

<sup>6</sup> Intermediaries should not deliver trades to funds with a trade date equal to an unscheduled close date. Funds should reject these trades back to the intermediary, if received, for resubmission following the UMC event.

<sup>7</sup> Funds that support DCC&S should expect to receive and process these prior-day trades on the first day of a UMC event. Funds may receive and should process other prior-day ("as-of") trades, including those in subsequent DCC&S cycles, throughout the UMC event.

It is important to note that during an unscheduled closing, the DTCC will—by default—remain in operation during the closure.<sup>4</sup> When that is the case, all trading, clearance, and settlement activities are “business as usual” from the DTCC’s perspective.<sup>5</sup> It is incumbent on each DTCC member to ensure that its systems and processes are in place to appropriately manage inputs from and outputs to the DTCC to match both the member’s operating circumstances and to fulfill trading, clearance, and settlement obligations to industry counterparties.

<sup>4</sup> Refer to *DTCC Reference Guide: Unscheduled Closing of Exchanges and Markets for Clearing Agencies* ([www.dtcc.com/~media/Files/Downloads/issues/Unscheduled\\_Close.pdf](http://www.dtcc.com/~media/Files/Downloads/issues/Unscheduled_Close.pdf)) for additional details. Note: The DTCC document assumes that bank and Fedwire services remain open (see page 3 of the *DTCC Reference Guide*).

<sup>5</sup> When time permits with an unscheduled closing (e.g., a presidential day of mourning), DTCC typically will release an Important Notice confirming its operating status during the event.



## Intraday Market Disruptions

Another type of “unanticipated” UMC event includes any intraday disruption where markets either suspend operation or close earlier than expected<sup>6</sup> (e.g., NYSE’s July 8, 2015, suspension of trading<sup>7</sup>). Because it is uncertain whether a suspended market will reopen later in the business day, preparations must be made as if it will remain closed. If the suspended market reopens prior to its normal closure time, fund operations typically resume largely without incident.

Depending on when fund documents such as the prospectus or statement of additional information (SAI) specify that the fund must price fund shares and stop accepting purchase and redemption orders (the “cutoff” time), an intraday market disruption could affect trade eligibility and acceptance as well as end-of-day fund pricing. It is recommended that funds review fund documents and understand the parameters of their fund cutoff times and the effect on valuation and fund operations. While far from exhaustive, ICI Memorandum 29831 lists two examples for deriving the cutoff time:<sup>8</sup>

- » Tying a fund’s cutoff time to that of the NYSE or, more broadly, security exchanges may offer advantages when pricing funds during an intraday market disruption when normal trading activity does not resume before closing. Such an approach allows securities valuation to occur as of the time of the trading disruption, thereby minimizing the need to fair value securities across affected portfolios in a limited time frame.
- » Tying a fund’s cutoff time to a specific time provides operational certainty to fund transfer agents, intermediaries, and related service providers as they implement fund trading policies. Because intermediaries typically support products from many fund families, they are typically more challenged by the complexity to quickly apply multiple variable cutoff times across their products. This is often the case when an intraday disruption is narrow (e.g., it affects only one market) and when it inconsistently affects funds because of differing policies.

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<sup>6</sup> See ICI Memorandum [29831](#), dated April 12, 2016, for an overview of potential legal and operational effects and matters to consider regarding existing policies, procedures, and related disclosure in the context of an unanticipated market disruption. (Note: This memorandum is available only to ICI members with website access.)

<sup>7</sup> See ICI Memorandum [29164](#), dated July 10, 2015, for a description of the event, general suggestions for response, and related resources. (Note: This memorandum is available only to ICI members with website access.)

<sup>8</sup> Each fund must separately determine the most appropriate policy or approach to determine its cutoff time, including other policies or approaches not specified in this document.

## Financial Activity Considerations

In the event of a market disruption, funds need to be prepared to quickly and concisely communicate their policies and procedures to intermediaries and other counterparties so all can react accordingly. Depending on the nature of the event and fund document provisions regarding valuation, it may be necessary for funds and intermediaries to segregate the day's financial transaction activity (e.g., NSCC, omnibus, and all direct-at-fund trades received by mail, fax, web, and telephone) based on time of receipt. Trades received after the point of disruption may need to be treated differently (e.g., future-dated, held for submission post-disruption, rejected) based on fund policies. Intermediaries trading with funds in an omnibus environment could be required to segregate aggregated trades into pre-disruption and post-disruption orders (for potentially different trade/effective dates). All parties (funds and their transfer agents, intermediaries) may need to quickly modify system configurations regarding the acceptance of certain telephone and web-based transactions and implement revised telephone scripts and website contents in response to the intraday market disruption.

Should a market remain closed on the next business day, funds may need to revisit decisions made on the previous day while implementing any other needed changes.

## UMC Operational Processing Considerations

When a UMC event is declared and the status of affected markets, exchanges, banks, and the NSCC is confirmed, fund companies and intermediaries might need to consider several factors prior to implementing their business continuity plan(s).<sup>9</sup> The categories and factors that should be considered, which are addressed in this section, are as follows:

- » Fund open<sup>10</sup>/closed status
- » Communications to shareholders, service providers, and intermediaries
- » NAV delivery
- » Dividend accrual activity
- » Output/file transmissions
- » Transfers (manual, Networking B52, and ACATS-Fund/SERV)
- » Settlement and money movement
- » Transaction processing

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<sup>9</sup> Funds and intermediaries are encouraged, as part of their preparation for future UMC events, to understand basic operational capabilities and expectations of their key trading partners in response to various UMC scenarios (e.g., full or partial closure, intraday disruption).

<sup>10</sup> By industry definition, *open* means that the fund will calculate an NAV that day. For daily accrual funds, a daily accrual rate will also be produced.

## Fund Open/Closed Status

During a UMC event, a critical detail for shareholders and intermediaries is whether each fund will be open or closed. In some instances, this decision is straightforward, based on the language in the fund's prospectus.<sup>11</sup> In other situations, multiple factors can determine which funds within a given fund complex will be open or closed during a UMC event (often, a fund complex will have a combination of open and closed funds). For these reasons, fund companies should expeditiously determine and clearly communicate their open/closed status to shareholders, intermediaries, and other business partners. Funds might need to consider these factors:

- » Each fund's prospectus language
- » The status of the securities market(s) cited in the prospectus
- » The status of markets or exchanges on which the fund's portfolio securities trade (e.g., the NYSE is closed, but the bond market is open<sup>12</sup> for all or part of the day) or the status of foreign securities markets
- » The status of NSCC regarding trading and settlement
- » Any custody or fund accounting limitations or concerns
- » Special considerations for different types of funds that will be open (e.g., money market, fixed income, international)
- » Impact on the fund's business partners and intermediaries (e.g., an expectation that money market funds, which are commonly used as sweep vehicles, will be open)
- » Duration of the market close if the time frame is known

For funds that are **open**, the following should be considered:

- » The fund's ability to provide services to its shareholders and intermediaries
- » The ability of service providers (e.g., transfer agent or designated subtransfer agent, intermediary subaccounting and recordkeeping providers, fund accountant, custodian) to provide necessary systems and services
- » The ability to calculate a fund NAV in accordance with fund prospectus provisions and appropriate regulations
- » The impact the event will have on output and file transmissions
- » Whether the prospectus allows for a nonstandard closing time

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<sup>11</sup> Fund prospectuses often contain language defining a business day and on which days the fund will calculate an NAV.

<sup>12</sup> The bond market is open if two counterparties choose to trade a fixed-income security on any given day. Because trading might be limited, funds might still not be deemed "open" if the securities traded have no impact on the portfolio valuation.

For funds that remain **closed**, the following should be considered:

- » Impact on the production of output<sup>13</sup> and file transmissions, including timing and distribution:
  - » Inclusion/exclusion of closed funds from output files produced for funds that are open
  - » Output produced and distributed without data (i.e., “null” files)
  - » Output/files not produced
- » Procedures to manage non-NSCC transactions (e.g., check-writing transmissions, automatic investment or systematic withdrawal plan transactions) that occur on the UMC date, which is not a valid trade date for the fund
- » General processing considerations, such as the following:
  - » Managing transfer activity, including
    - » acknowledgment of ACATS-Fund/SERV<sup>14</sup> transfers;
    - » Networking B52 processing; and
    - » manual activity
  - » Money movement and settlement
  - » Types of transactions that will be processed (financial and nonfinancial)
  - » Impact on scheduled or pending dividend payments, capital gains payments, etc.
- » If the UMC crosses a period-end, there may be additional effects to NAV calculations, accrual payouts, statement production, calculation of fees and other billing activities, and other periodic activity that could require additional attention/action.

## Communications to Shareholders, Service Providers, and Intermediaries

During a UMC, clear, concise, and timely communication is imperative to minimize the disruption. Lack of clear and timely communication can lead to further confusion and delays at an already stressful time. Proactive two-way communications among funds, intermediaries, and service providers will help all parties navigate through a UMC event.

Currently, there is no standard, industrywide central repository for reporting a fund’s open/closed decision during a UMC event.<sup>15</sup> Instead, fund companies use various methods to distribute information, including website posts, email blasts, and facsimile transmissions. In outsourced servicing models, a fund may turn to its third-party transfer agent that has the operational contacts necessary to help facilitate communication. As a result, each fund group should

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<sup>13</sup> For this document, *output* means any system file commonly transmitted between a mutual fund and an intermediary on a normal business day.

<sup>14</sup> The NSCC ACATS-Fund/SERV interface allows mutual funds to electronically update their account registrations when a customer account is transferred from one intermediary or bank to another.

<sup>15</sup> Because each UMC event has a unique combination of factors to consider, there is no broad support among funds or intermediaries for a common repository. However, the ORTF continues to explore opportunities to more effectively communicate UMC-related details between funds and intermediaries.

develop its own communication plan, including content, timing, and methods used to disseminate information. To aid in that planning, the ORTF has identified the following communication objectives:

- » Send targeted communications (such as email notifications) that explicitly indicate funds' open or closed status. It may be necessary to provide multiple communications to various parties based on product or distribution characteristics—such as US-registered funds or non-US-registered funds—or on a product-specific basis (e.g., money market funds). The communication should include the following:<sup>16</sup>
  - » Committee on Uniform Security Identification Program (CUSIP) number or International Securities Identification Number (ISIN) for each applicable security
  - » Ticker
  - » Fund name
  - » Share class
- » Provide separate confirmation of closed CUSIPs that will not be providing a daily accrual rate during the UMC event.
- » Provide specific critical contact information, including how and when to contact.
- » Define timing of communications (e.g., prior to the event, by a certain time on the first day of an event, frequency of updates) and method(s) of communication.
- » Assess impact on call centers and servicing centers:
  - » Business hours observed and communication of hours of operation, especially if altered
  - » Details related to call center and service center hours if posted on the fund's website(s)
  - » Changes to upfront messages for voice response units (VRUs) for client services and dealer services operations
- » Fund companies should incorporate external/internal websites<sup>17</sup> in the development of any communication plan and consider the following:
  - » Website messaging should be consistent with notifications to shareholders and intermediaries.
  - » The last available NAV for funds that are closed during a UMC event should remain on fund websites throughout the event, identified by their business (effective) date.
  - » Current NAV information (e.g., price, effective date) should be posted for funds that will remain open.
- » Develop practices to create or maintain current contact information (e.g., email distribution lists) for those counterparties who should receive communications.
- » If applicable, review communication plans with third parties that the fund intends to use to help facilitate communication in the event of a UMC.

Appendix F includes sample communications prepared by funds for delivery to intermediaries that the ORTF deemed especially helpful during a presidential day of mourning UMC event, where one or more business days are available to prepare. However, the basic framework and contents of the notices are universally applicable to any type of UMC event.

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<sup>16</sup> When a fund complex's entire portfolio of funds is either open or closed during a market close event, the following details are optional. Funds should, however, explicitly communicate the open/closed status of the entire fund complex.

<sup>17</sup> Funds may consider supplementing their intermediary back-office communication through a webpage that presents current information related to a UMC event. Intermediaries on the task force indicated a continued preference for "push-oriented" notifications from the fund, such as blast emails and other types of communication.

## NAV Delivery

Timely delivery of funds' NAVs at the end of the day is essential to facilitate (1) daily confirmation of NSCC orders by funds to intermediaries and (2) timely processing of daily activity by both funds and intermediaries. The possibility of delayed release of NAVs or communication through nonstandard protocols—both of which are likely to occur during and immediately following a UMC event—should be anticipated by all parties. Delayed release or nonstandard communication of NAVs increases the likelihood of downstream effects, such as late/compressed processing cycles. Processing delays or files submitted after cutoff times could result in an increase of prior-day “as-of” trades submitted by intermediaries with corresponding requests for fund price protection and an increase in the number of estimated trades that funds must consider when calculating NAVs.<sup>18</sup> Delayed release of NAVs could also result in increased call center, VRU, and website activity. It is critically important for funds to communicate any expected delay in NAV dissemination to intermediaries as soon as it becomes apparent so that intermediaries can plan accordingly.

To address NAV delivery issues, the ORTF determined the following industry practices for a UMC event:

- » Release of fund NAV:
  - » Fund companies should report NAVs only for funds that are open during a UMC.
  - » Intermediaries should plan to accommodate later receipt of NAVs, both during and for the first one to two business day(s) following a UMC event.
  - » Consideration should be given to delaying the final daily batch-processing cycle until after receipt of output from the NSCC Mutual Fund Profile Service I (MFPS I)—Price/Rate cycle 98 (10:45 p.m. ET).
  - » Funds might need to employ alternate means of delivering daily NAVs if they are unable to produce the NSCC MFPS I—Price/Rate output during a UMC event. Delivery of NAVs through NSCC MFPS I—Price/Rate service is the common industry practice.
  - » Alternate means of NAV delivery should favor machine-readable formats (e.g., comma-delimited spreadsheet) over more static, less-accessible formats (e.g., portable document format [PDF] files).
  - » The MFPS I—Price/Rate service supports a spreadsheet template-based upload of NAV and daily accrual rates into its Web Direct service.<sup>19</sup>

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<sup>18</sup> As-of transactions, NAV price protection, and trade estimation are exception processing industry practices, which are completed at the option of the fund in accordance with applicable regulation and terms of agreements between the funds and the intermediaries.

- » As-of trades may occur when an intermediary receives a trade order from a shareholder before the fund's cutoff time (usually the close of the market) on day 1 and then transmits the order to the fund company on day 2 (trade date+1).
- » Price protection is an affirmation by a fund that an as-of trade will be processed at the applicable day 1 NAV when received for processing on day 2.
- » Trade estimation occurs when an intermediary is in the process of completing the final trade cycles as part of nightly processing routines but is unable to submit those trades to the fund before the processing cutoff time established by the fund. The intermediary requests price protection from a fund for the final trades that will be sent in a later cycle and provides the fund with the estimated value of the unsubmitted trades. The fund NAV calculation for that day includes the estimated trade value to minimize any impact on the fund and its shareholders.

<sup>19</sup> Refer to the Mutual Fund Services section of [www.dtcc.com](http://www.dtcc.com) for additional details on the web-based functionality.

- » Fund companies should be aware that a delay in calculating and reporting NAVs could have a cascading effect on valuing fund-of-fund structures as well as delay an intermediary's nightly processing. This, in turn, could lead to funds receiving an increased number of requests for as-of transactions and trade estimations from intermediaries that are unable to meet fund processing cutoff times for transmitting transaction files for nightly cycles. Fund companies should seek to minimize delays whenever possible to avoid such workarounds.
- » Funds should consider communicating their cutoff time for price protection with other communications that are part of a UMC event.
- » NAV corrections:
  - » Fund companies should convey any changes or corrections to an NAV through their normal processes/ procedures and communication channels.
  - » Funds and intermediaries should follow existing procedures to review and address NAV corrections.
- » Asset-based fees and other compensation cycles:
  - » Commission and asset-based fee payments may be delayed if the UMC event occurs during a payment cycle (typically weekly, biweekly, or monthly).

## Dividend/Accrual Activity

During a UMC event, there are several considerations for closed funds about the treatment of daily accrual rates, as well as the effects on dividend and distribution declaration and payment.

*When operating normally*, funds typically follow one of two practices for accrual calculation and delivery:

**Practice 1:** The industry's long-standing practice has been for funds to calculate and provide two types of accrual factors for daily accrual funds:

- » A single-day rate for most business days
- » A multiday rate (also known as a "bulk" or "fat" rate) to cover a business day plus planned/nonbusiness days (e.g., weekends, certain holidays) adjacent to the business day<sup>20</sup>

The multiday rate is effective because cash settlement, which affects accrual entitlement, does not occur on planned weekends/holidays/nonbusiness days.

<sup>20</sup> The multiday rate is calculated and applied most commonly on the business day preceding nonbusiness day(s) and less commonly on the first business day following the nonbusiness day(s). For example, a multiday weekend rate that includes the rate for Friday, Saturday, and Sunday would be provided on the Friday preceding the weekend; a multiday weekend rate that includes the rate for Saturday, Sunday, and Monday would be provided on the Monday following the weekend.

**Practice 2:** A second practice has emerged where funds provide a single-day accrual factor for every calendar day—treating each business and nonbusiness day identically from an accrual perspective.

When operating during a UMC event, both open and closed funds may be required to complete cash settlement on the days occurring during the UMC event. NSCC Fund/SERV® trading activity that was processed prior to the UMC event and whose settlement date is during the UMC event would require settlement in certain scenarios, even if a fund is closed. As a result, it is also critical that intermediaries know the daily accrual amount (or rate) applicable to each day during a UMC event in which cash settlement is occurring to ensure that proper accrual entitlement is applied to fund shareholders.

The ORTF’s optimal industry practice for delivering dividend/accrual rates requires funds, on each day of a UMC event, to provide a daily rate for all **open and closed** funds transmitted through regular accrual factor communication channels.<sup>21</sup> Such practice would be “business as usual” for a fund providing a single-day rate per calendar day (accrual Practice 2).

Although Practice 2 is identified as optimal, the ORTF has learned that Practice 1 is more prevalent in the industry. During a UMC event, these funds typically do not provide daily rates for funds closed due to the UMC. Instead, they provide a multiday rate inclusive of the UMC on the first business day **following** the UMC event.<sup>22</sup> Some funds supplement this practice by also providing intermediary partners with a spreadsheet-based breakdown of the dates and single-day rates that make up the multiday rate inclusive of the UMC.<sup>23</sup> The disadvantage of Practice 1 in the context of a UMC event is that it requires funds and intermediaries to estimate accrual entitlement during the UMC event when cash settlement is necessary. On receipt of the actual factors after the UMC event, all parties must reconcile estimated accrual entitlements and payouts posted during the UMC event and take any necessary corrective action to ensure that shareholders receive the appropriate earnings.

In summary, accrual factor calculation and delivery practices should ideally incorporate the following objectives:

- » Use of single-day and multiday daily accrual rates:
  - » All fund companies should deliver single-day rates to intermediaries each day during the UMC event for all accrual funds closed due to the UMC.
  - » Fund companies should follow their normal accrual calculation and delivery procedures when one or more normal nonbusiness days (e.g., weekend, certain holidays) are encountered. For example:
    - » If a fund company normally declares a three-day rate on Friday or Monday, inclusive of a weekend, rates should continue to be provided in the same manner.
    - » Funds that deliver single-day rates throughout the weekend and holiday(s) should continue to do so.

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<sup>21</sup> Funds often use file transmissions and other electronic means to deliver daily accrual factors to pricing services, trading networks, and other business partners. An example is the NSCC Mutual Fund Profile Service (MFPS) I price and rate service. Refer to [www.dtcc.com/wealth-management-services/mutual-fund-services/mutual-fund-profile-service-i](http://www.dtcc.com/wealth-management-services/mutual-fund-services/mutual-fund-profile-service-i) for details.

<sup>22</sup> During an “anticipated” UMC, such as a presidential day of mourning, advance notice may allow funds to provide single-day rates during the UMC (accrual Practice 2) or provide a multiday rate prior to the UMC. Funds should make sure that their accrual rate dissemination strategy for any UMC event, even if “business as usual,” is clearly communicated to business partners.

<sup>23</sup> ORTF members discussed a recommended practice to deliver these single-day factors by file transmission, such as the MFPS I price and rate service. While some intermediaries may benefit from this automated delivery, most funds on the ORTF indicated that their transfer agent recordkeeping system generates rate transmissions and, with multiday factors used, would not be able to transmit the single-day factors. Other intermediary systems required the same factor to match the funds, using the single-day rates by spreadsheet for individual account adjustments. The long-term solution is for the industry to adopt Practice 2 for rate calculation and delivery, precluding the need to manage multiday rates.



- » Changes or corrections to daily accrual rates after dissemination:
  - » Any changes or corrections to rates after distributions have been made should be determined by the fund company in accordance with its existing policies and procedures.
  - » Fund companies should communicate any changes or corrections to a daily accrual rate through their normal processes/procedures and communication channels.
  - » Funds and intermediaries should follow existing procedures to review and address any daily accrual rate corrections.
- » UMC occurs during record date and/or ex-date/reinvestment date:
  - » Record date, ex-date, and reinvestment date effects for closed funds:
    - » If a fund is closed due to a UMC event, any scheduled record date, ex-date, or reinvestment date cannot be honored, and an adjustment of such dates would be required.
    - » Payment date during a UMC could be supported if banks are open and NSCC settlement occurs.
    - » Like NAV delivery effects, adjustments to these dates will affect processing for industry stakeholders. To minimize consequences, funds should follow current protocols, including the use of NSCC solutions, as well as alternate means of communication, to convey the updated distribution schedule to shareholders, intermediaries, and other business partners.
- » Periodic (quarterly, annual, etc.) distribution changes:
  - » If the record date occurs during a UMC event, the industry practice is to default to the fund's first business day following the UMC event.
  - » Ex-date/payment date/reinvestment date(s) should be adjusted based on changes to the record date. For example:
    - » If the record date falls during the UMC event and is moved as specified above, all other corresponding dates (ex-date/payment date/reinvestment dates) should be reviewed to ensure that there is no conflict and that they are adjusted as appropriate.
    - » If the record date was not affected by the UMC event but other dates (the ex-date, payment date, and reinvestment dates) are affected, such dates should be reviewed and adjusted based on the fund's first business day following the UMC event.
  - » Daily accrual (month-end) distribution changes:
    - » The month-end ex-date/payment date should default to the first business day in the next month that the fund reopens for business following the UMC event.
    - » The accrual period for the payout should not be affected if single-day rates were distributed for the UMC days during or after the event.
- » Dissemination of rates:
  - » The recommended practice is that daily rates should continue to be distributed through NSCC's Mutual Fund Profile Service (MFPS) I—Price/Rate<sup>24</sup> during each day of the UMC for all open and closed funds, including following all regular rate distribution practices for already-scheduled nonbusiness days (e.g., weekends, certain holidays).

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<sup>24</sup> MFPS I provides funds with an automated solution for transmitting daily prices and rates for daily accrual funds to intermediaries.

## Example of Changes to Period-Ending Dividend Accrual Payouts during a UMC:

Two possible approaches could be used when a UMC event occurs at month-end and affects the accrual payout process. For example, if a UMC event occurred for two days at month-end on October 31 and November 1, October's monthly accrual (10/1–10/31) would be paid out on the first business day that the fund reopens, on November 2.

- » The most common industry practice would be to include only the month of October for the accrual payout period, even though the payout occurred on the first business day after the UMC event—November 2. The November accrual (11/1–11/30) would be paid out, in full, at the end of November.
- » An alternative method would be to pay out all accrual earned since the last payout. The October accrual (10/1–10/31) and November 1 and 2 accrual would be combined and paid out on November 2. The November accrual would begin on November 3 (excluding the first two days in November, which were already paid). The November accrual (11/3–11/30) would be paid out at the end of November.

Funds should consult with fund accounting and transfer agents to determine how payout will be handled and communicate the appropriate details to shareholders, intermediaries, and relevant business partners.

- » As previously described, some funds are passing single-day rates from a UMC event via spreadsheets when sending (through regular delivery methods) the multiday rate that includes UMC event accruals. This is done because the funds do not provide accrual factors on nonbusiness days (such as during a UMC event). Funds should consider continuing this practice if they are unable to comply with the recommended practice.
- » Periodic rates should be distributed through MFPS I—Price/Rate and NSCC's MFPS II— Distribution Declaration.<sup>25</sup> If applicable, funds should follow any existing practice of providing periodic distribution rates through a spreadsheet emailed to intermediaries.
- » During a UMC and for one to two business days immediately after, intermediaries should exercise flexibility when receiving delayed rates, up to MFPS I—Price/Rate cycle 98 (10:45 p.m. ET).
- » Fund company delays in calculating and reporting dividend and accrual rates may delay intermediary processing, which can lead to funds receiving more requests for late transactions files that could require special handling (as highlighted in the NAV delivery section). Fund companies and intermediaries should aim to minimize delays whenever possible.

Appendix C provides additional details about potential effects to accrual entitlements based on the transaction type (i.e., share credit or debit), when shares are entitled to accrue, and when transaction settlement occurs. One table highlights the use of a multiday rate received following a UMC event (and covering the days of the UMC event). Additional details describe the effect of daily NSCC settlement during a UMC on closed funds and accrual entitlements.

<sup>25</sup> MFPS II distribution database provides projected and actual distribution data, such as record, reinvestment, and payable dates for dividends and capital gains.

## Output/File Transmission

Numerous systems “output” files are transmitted between funds and intermediaries on a normal business day. The output produced during a UMC event can vary widely due to several factors:

- » *Whether funds are open during the UMC event.* In most cases, output produced by fund transfer agents or intermediaries reflects financial and/or nonfinancial activities<sup>26</sup> processed by recordkeeping or subaccounting systems. The output produced during a UMC event typically will include activities processed for open funds. A fund complex with all funds closed and whose transfer agent system is not executing a nightly processing cycle is unlikely to produce any output.
- » *The ability to segregate open funds from closed ones in the output production process.* In some instances, systems limitations might preclude funds or intermediaries from omitting closed funds from appearing with open funds in output produced. Therefore, certain types of output produced may include both open and closed funds during a UMC event.
- » *Interrelated system processes completed by the fund, intermediary, or service provider could affect output production.* Some types of output could depend on multiple inputs from separate processes. Any of these separate system processes that did not or could not execute due to a UMC event could adversely affect contents of output files or the ability to produce output.
- » *Whether an intraday disruption occurs.* Depending on the nature and timing of an intraday market disruption, some output could be affected due to missed cutoff times, lack of available inputs, or other factors that may become apparent only during the event.

The ORTF reviewed files produced by fund transfer agents and intermediaries on a normal business day. To minimize processing effects during a UMC event, the following industry practices should be deployed for output/file transmission activities.

### Primary Files (Critical)

The following primary or “critical” files containing key data on activities and settlement effects should be produced on any UMC date when transactions and activities, both financial and nonfinancial, are processed.

- » NSCC Fund/SERV files:
  - » If a fund is open, normal “business as usual” processing and output should occur.
  - » If a fund is closed, output should be produced for processing that rejects new current-date NSCC activity (orders and exchanges) and that accepts valid prior-day trades received during the UMC event.
  - » For ACATS-Fund/SERV transfer processing, receiving funds should either produce acknowledgments or rejections within two business days of receipt. See the section titled “Exception Processing for ACATS-Fund/SERV Acknowledgment” on page 19 for further details.

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<sup>26</sup> Financial activities involve the movement of mutual fund shares or cash. Nonfinancial activities involve the movement of data, such as a change of shareholder address.

- » NSCC Networking files, including new accounts, nonfinancial updates, transfers, position, and activity. Additional Networking files are categorized as secondary (noncritical) and listed in the next section.
- » NSCC MFPS I—Price/Rate files, for all open funds and all daily accrual rates (for open funds as well as closed funds, as available)
- » NSCC MFPS II—Distribution Declaration files, for any additions or changes to declared dividend, capital gains, or other distribution types reported through this service
- » Other critical non-NSCC proprietary files, such as Securities Processing Activity Confirmation (SPAC)<sup>27</sup> files

## Secondary Files (Noncritical)

The following files are considered “noncritical” and should be transmitted once normal processing has resumed after a UMC event, if otherwise unable to be created/transmitted during an event. However, the timing and duration of a UMC event (e.g., month-end, quarter-end, or year-end) could affect the resumption of normal processing and the production of secondary files. The transmission of secondary files should follow normal delivery schedules after a UMC event. The following secondary files and considerations should be addressed:

- » Daily Activity (known as the DSA file) and Daily Position (known as the DSP file) files—for intermediary omnibus accounts, whether transmitted through the NSCC’s Networking Omni/SERV<sup>28</sup> service or via direct transmission (point-to-point) from intermediaries to funds. Activity reporting might need to cover multiple days once file transmissions resume.
- » NSCC 529 Plan Aggregator files<sup>29</sup>
- » NSCC Payment aXis<sup>®</sup> files<sup>30</sup>
- » NSCC Networking Standardized Data Reporting files<sup>31</sup>
- » NSCC Networking Share Aging files<sup>32</sup>
- » NSCC Networking Retirement Plan Reporting files<sup>33</sup>
- » NSCC MFPS II Security Database output files<sup>34</sup>
- » DTCC Cost Basis Reporting Service (CBRS) files<sup>35</sup>—used to transfer required cost basis tax lot information

<sup>27</sup> SPAC files are a common proprietary file format used by certain intermediaries to receive activity and position data from funds.

<sup>28</sup> The NSCC Networking Omni/SERV service provides a standardized and automated exchange of underlying (beneficial) shareholder account information and activity for omnibus accounts held on the fund transfer agent recordkeeping system in the name of intermediaries.

<sup>29</sup> The NSCC 529 Plan Aggregator files support reporting obligations for 529 plan (e.g., educational, disabled individuals/family) accounts.

<sup>30</sup> The NSCC Payment aXis service automates the processing of commissions and various fees (including Omni/SERV invoices) between funds and intermediaries.

<sup>31</sup> The NSCC Networking Standardized Data Reporting service automates the data exchange that supports monitoring by funds of trading frequency by underlying investors whose transactions are conducted in omnibus accounts for SEC Rule 22c-2 compliance.

<sup>32</sup> Networking Share Aging files allow participants to pass share lot information on beneficial owner accounts that are needed to determine age and eligibility for assessing short-term redemption fees, 12b-1 fees, and other contingent deferred sales charges.

<sup>33</sup> The NSCC Networking Retirement Plan Reporting service supports reporting of retirement plan information among industry participants.

<sup>34</sup> The NSCC MFPS II Security Database provides comprehensive prospectus and fund operational rules that assist distribution of mutual funds through intermediaries.

<sup>35</sup> IRS regulations require tax lot information to be communicated by the delivering broker (the party currently responsible for tax reporting) to the receiving broker for transferred shares within 15 calendar days of an account transfer. In the (highly unlikely) event of a UMC that exceeds 15 calendar days, consideration should be given to generating this information during the UMC event.

- » Contingent Deferred Sales Charge (CDSC) Liability files—monthly reports transmitted by intermediaries to funds
- » Other non-NSCC files—includes other proprietary files created by funds and intermediaries that provide detailed information on shareholder transaction and position activity that are transmitted between the parties outside the NSCC

## Transfers (Manual, Networking B52, and ACATS-Fund/SERV)

Transfer transactions represent the reregistration of beneficial owner fund shares between intermediaries and the fund. From an intermediary perspective, certain transfers create a financial impact because the transfer is moving customer assets between intermediary firms. In addition, the impact of dividend and capital gain entitlement for the underlying shareholder positions might affect subsequent distribution transactions. Therefore, industry practice is to process all transfer requests during a UMC event, regardless of a fund's open/closed status.

It should be noted that most fund transfer agent systems require an NAV to complete transfer processing,<sup>36</sup> even though the transfer is a reregistration of fund shares from one account to another on the transfer agent system. In these instances, procedural changes or system enhancements might be required to address the NAV processing requirement, such as using the last available NAV to process the transfer.

The industry supports the following transfer transactions:

- » Manual transfers processed by the fund from paper instructions received from shareholders and/or intermediaries
- » NSCC transfers that include processing:
  - » Networking B52 transfers, which are used primarily to transfer shares between two different accounts held on behalf of a beneficial owner by the same intermediary or to facilitate the wholesale transfer of positions between two intermediaries
  - » ACATS-Fund/SERV transfers,<sup>37</sup> which are initiated by intermediaries in the DTCC's Automated Customer Account Transfer Service (ACATS), where a customer's position moves between intermediaries or between an intermediary and a fund (known as an ACATS PTF transfer)

Industry practices encourage the use of automated transfers whenever possible. They are typically the quickest, most efficient way to facilitate the reregistration of shares and movement of ancillary data like cost basis and share aging records between counterparties and counterparty systems. NSCC-based transfers assign a control number to each step of the transaction that can be followed from initiation to completion, providing assurances that all steps were successfully completed or supplying a common reference identifier should any portion of the transaction fail.

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<sup>36</sup> NSCC Networking activity record F55 also requires an NAV to be provided when a transfer is reported.

<sup>37</sup> ACATS interfaces with NSCC Fund/SERV to facilitate movement of a customer's mutual fund share position. For further details on ACATS-Fund/SERV transfers, please see Appendix D.

## Manual Transfers

During a UMC event, the ORTF identified the following industry practices for manual transfer processing:

- » Manual transfers, if received by the fund, should be processed. Intermediaries generally submit manual transfers for several reasons, including to process failed ACATS-Fund/SERV transfers.<sup>38</sup> Fund complexes that process manual transfers during a UMC event allow intermediaries to appropriately transfer shares to underlying shareholder accounts on a timely basis.
- » Manual transfers might require the creation of Networking Share Aging and DTCC Cost Basis Reporting Service (CBRS) Tax Lot Information files, as detailed below.
- » An intraday market disruption may result in different effects on transfer processing. Depending on the timing and duration of the event, and with an expected focus on determining trade eligibility, manual transfer processing may be postponed.

## NSCC Transfer Processing

During a UMC event where the NSCC is open, the ORTF identified the following industry practices for Networking B52 and ACATS-Fund/SERV transfer processing and other ancillary activities:

- » Networking B52 transfers: Networking transfers, if submitted, should be processed.
- » ACATS-Fund/SERV transfers: Unprocessed or unacknowledged transfers trigger significant downstream effects similar to rejected transfer activity. Therefore, mutual fund ACATS-Fund/SERV transfers, at minimum, should be acknowledged by funds through the NSCC and, preferably, processed by transfer agents during a UMC event. Should underlying systems require an NAV to facilitate processing, it is recommended that the last available NAV be used.<sup>39</sup>
- » Networking Share Aging: These files detail share-lot records for contingent deferred sales charges (CDSC), short-term redemption fees, and other age-based processes (e.g., C-share conversions). Share Aging files should be transmitted by funds to intermediaries through the NSCC when appropriate.
- » DTCC CBRS Tax Lot Information: These files communicate important cost-basis tax lot information that is required to support mandatory cost-basis reporting. Generation of the fund's CBRS Tax Lot Information files for transmission to intermediaries through the NSCC is initiated when transfers are processed on the fund's transfer agent system.

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<sup>38</sup> NSCC Networking B52 transfers can also address failed ACATS-Fund/SERV transfers.

<sup>39</sup> Because transfers are not price-dependent transactions, using the last available NAV will not affect the reregistration of shares.

## Exception Processing for ACATS-Fund/SERV Acknowledgment

Transfers initiated by intermediaries through the ACATS-Fund/SERV service require acknowledgment by funds within two days of receipt. Otherwise, the transfer “fails” and requires manual remediation between the intermediary counterparties and with the fund. To assist intermediaries in their remediation process, funds using a transfer agent system that cannot systematically acknowledge ACATS-Fund/SERV transfers within two days of receipt by a closed fund should implement the following exception processing:

- » Funds should create an ACATS-Fund/SERV manual acknowledgment spreadsheet for each intermediary to acknowledge receipt of their transfers for processing on the fund transfer agent system on the first business day following the UMC event. The report should include the following data elements:
  - » CUSIP
  - » From/To account number at fund and at firm (if provided with the transfer instructions received via NSCC file or manually)
  - » NSCC ACATS-Fund/SERV control number
  - » Shares to be transferred
  - » Transfer receipt date
  - » Transfer process date
  - » Fund settlement date<sup>40</sup>

## Completion of Transfer Processing Following a UMC Event

Funds that manually acknowledged transfer requests through exception processing should use all ACATS-Fund/SERV records received during the UMC event to automatically complete transfer processing on the fund transfer agent system on the first business day following a UMC event. If transfer processing produces ACATS-Fund/SERV acknowledgment records that were previously sent during the UMC event (either systematically or manually), funds should withhold transmissions of these records to the NSCC as they will be rejected back to the fund. Please refer to the ACATS-Fund/SERV transaction flowchart found in Appendix E for additional information.

Intermediaries should anticipate that funds will process all ACATS-Fund/SERV transfers acknowledged as reported on the spreadsheet. Therefore, intermediaries do not need to submit manual transfer requests to clear the automated failure of the original ACATS-Fund/SERV transfer requests that were manually acknowledged during the UMC event. To avoid duplicate transactions, intermediaries and funds should discuss when there is a need for intermediaries to send additional manual instructions, NSCC Networking records, or ACATS-Fund/SERV records for any failed transfers.

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<sup>40</sup> The fund settlement date represents the effective date the transfer of shares moved on the books of the fund. For as-of transfers, the as-of date should be used. The date allows firms to synchronize to the date the transfer occurred at the fund for the purposes of calculating dividend accruals, etc.

## Settlement and Money Movement

There are additional challenges for the industry during UMC event scenarios when both the Federal Reserve and the NSCC are open and the markets and funds are closed because cash-settlement obligations for fund trading conducted through the NSCC must still be processed by industry participants. Ancillary cash-settlement processing activities must also be addressed during a UMC event. These activities include dividend accrual entitlement for shareholders whose transactions are settled during a closure (see the section on dividend/accrual activity for details) and check-writing and debit-card activities offered as cash-management account features for certain fund shareholders.

During a UMC event, the following industry practices should be considered for money movement and settlement:

- » Cash settlement:
  - » NSCC participants—both funds and intermediaries—must settle trades, as usual, on valid settlement dates regardless of fund type (e.g., equity, bond, money market).
  - » Money market funds
    - » If a money market fund is open for trading for any portion of a UMC day, funds and intermediaries should support normal trading and settlement schedules where feasible (same-day, T+1, T+2).
    - » Money market funds often close when bond markets are closed. Notwithstanding any NSCC settlement obligations mentioned above, funds and intermediaries should be prepared to address closed money market fund cash overdrafts or uninvested cash scenarios that could occur. Intermediaries and funds are strongly encouraged to discuss plans and expectations as part of ongoing planning for UMC events.

### Cash Availability: A Critical Consideration

Experience with past UMC events has reinforced the need to broadly communicate within the fund organization about cash-settlement requirements during a UMC event. In some instances, certain key areas within the fund complex were unaware that settlement was required during the UMC. Failure to adequately prepare for this need could have acute liquidity effects on fund operations. For instance, portfolio managers may use money market fund sweeps to hold cash overnight. If the money market fund used is closed during a UMC event, however, that cash may not be accessible to support the fund's settlement obligations. Custodians and administrators should be prepared to access lines of credit or other external short-term cash sources if needed to supplement the fund's cash needs when meeting settlement obligations. Back-office organizations may need to estimate and report mutual fund share trade settlement obligations occurring during the UMC event.



- » Money movement:
  - » If the Federal Reserve and DTCC are open, the following money movements relating to shareholder settlement activities will occur, when applicable, throughout the UMC event:
    - » Fund/SERV net settlements, including DCC&S activity
    - » Shareholder wires
    - » Wires for manual transactions received from third-party administrators (i.e., 401(k) and variable annuity trades)
    - » Automated Clearing House (ACH) electronic money movement
    - » Clearance of shareholder check-writing checks or drafts and fund dividend/redemption checks when presented for processing
  - » Funds should consider the availability of funding for cash-settlement obligations, including the expected release of wires during a UMC event. These activities should include the following:
    - » Monitoring and coordinating money movement for settlement accounts with fund treasurers, portfolio management, custodians, and transfer agents to avoid overdrafts. A review of available options, including lines of credit, should be conducted as needed.
    - » Monitoring for potential shareholder account overdrafts that may occur from debit-card and check-writing activities due to timing differences or delays in processing shareholder transaction activities.

## Transaction Processing

Funds should consider the impact a UMC event will have on transaction processing activities. Categories of transactions to consider include the following:

- » NSCC current-day activity
- » NSCC prior-effective date/DCC&S transactions
  - » Rule review for closed funds—as-of orders
  - » DCC&S transactions
- » Automatic investment plans (AIP) and systematic withdrawal plans (SWP)<sup>41</sup>
- » Other automated transactions received through file transmissions
- » Telephone transactions received through automated VRUs or through transfer agent representatives
- » Web transactions
- » Transactions received through mail

Each of these categories may have special circumstances that need to be evaluated when funds and intermediaries are considering how to proceed with processing during the UMC event.

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<sup>41</sup> Plans allow for automatically scheduling the purchase or redemption of fund shares on a predetermined schedule.

## NSCC Current-Day Activity

When the NSCC is open during a UMC event, any Fund/SERV trade (order) sent by intermediaries through the NSCC that passes the NSCC's processing edits will be delivered to corresponding funds as part of normal processing cycles. This will occur whether a fund is open or closed. Current-date orders submitted by intermediaries for funds closed during a UMC event will not be processed because the current day is not a business day during a UMC event. These orders should be immediately rejected by the closed fund and returned to the NSCC for delivery to applicable intermediaries with Reject Code 016 ("Trade Date Missing/Invalid"). When a fund family has only a subset of funds open for trading (i.e., money markets), intermediaries may experience delayed confirmations due to the special handling that may be required.

To reduce trade rejects during a UMC event, intermediaries should not transmit current-day orders to funds that are closed. Intermediaries should submit held and resubmit rejected trades on the first business day that funds reopen and should properly assign that day as the new trade date.

To further reduce trade rejects, funds and intermediaries should continue to process all Networking activity files, including transfers (B52), maintenance updates (B51), and new accounts (B50). Processing can occur either during the UMC event (recommended practice) or prior to processing trades received on the first business day that the fund reopens following the UMC event. Funds will avoid unnecessary trade rejects by processing Networking activity files before post-UMC Fund/SERV trades.

## NSCC Prior-Effective Date/DCC&S Transactions

If the NSCC is open during a UMC event, all funds should process and confirm all trades received in good order with valid trade dates and settle as usual. This includes all prior-effective date transactions with valid trade dates that are received throughout a UMC event and incorporates DCC&S activity—a special category of prior-effective date activity that is described in detail later in this section. All these transactions represent trading activity that is in "good order" from prior fund business days.

*NSCC rule review for closed funds—as-of orders:* In the event of a full-day UMC event with NSCC open, NSCC considers all UMC dates to be normal, "business as usual" dates, while closed funds do not. This difference temporarily manifests itself with any rule that NSCC uses to determine valid prior trade dates during a multiday UMC event and **always** on the first day following any UMC event. As a result, closed funds that narrowly (by date) permit receipt of as-of (prior-effective date) orders, including DCC&S orders, may experience unexpected trade rejects at NSCC during these times.

To eliminate unexpected trade rejects related to prior-effective dates, funds may want to ensure that their rule at NSCC for accepting as-of orders is set to at least one day greater than the anticipated length of the UMC.<sup>42</sup> For example, a full-day UMC event covering one day would require a closed fund to have a value for allowable as-of orders of two (or more) days, so that all expected prior-effective date trades would be received from NSCC. Higher values may be needed for UMC events of unknown duration. Funds with as-of order rules already set to at least one day greater than the anticipated length of the UMC event would require no changes at NSCC.

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<sup>42</sup> The decision to update rules at the NSCC is made independently by each fund. NSCC can temporarily or permanently update the number of as-of days permitted, by CUSIP, on member request. Updates can be made during a UMC event with enough notice. Orders rejected by the NSCC due to this rule will require the trade counterparties to place, process, and settle the orders outside of NSCC.

*DCC&S transactions:* DCC&S transaction activity is a special category of prior-effective date transactions. The activity reflects the net impact of the previous business day's transactions received by retirement recordkeepers and omnibus intermediaries that were processed on recordkeeping and subaccounting systems through nightly processing cycles and typically transmitted to funds through a series of NSCC Fund/SERV cycles occurring in the early morning on T+1.<sup>43</sup> DCC&S transactions are settled on date of receipt; confirmed trades are automatically included with that day's net settlement activity.

When NSCC settlement occurs during a UMC event, the **recommended practice** for intermediaries is to submit **all** DCC&S activity from the last business day prior to the UMC on the morning of the first day of the UMC. This applies to all funds, whether open or closed during the UMC. Funds should receive, process, and (if in good order) settle activity on the same day. Following the recommended practice consolidates DCC&S activity and settlement for closed funds to the earliest settlement date and provides the greatest opportunity to manage exception processing while assisting funds in managing liquidity needs. It also aligns with "business as usual" processing of DCC&S activity and should avoid unanticipated trade rejects for closed funds due to the as-of order rule previously discussed.

When NSCC is settling activity throughout a UMC event, it is possible that DCC&S activity for the closed fund's last business day prior to the start of a UMC may be received on *two or more days*. While not the recommended practice, intermediaries could potentially send closed fund DCC&S activity from the last business day prior to the UMC as follows:

1. During DCC&S cycles on any UMC dates where settlement is occurring (the DCC&S cycle on the first UMC date is the recommended practice)
2. During the DCC&S cycle on the first business day post-UMC when most funds reopen

Although not the recommended practice, funds should be prepared to receive, process, and (if in good order) settle DCC&S activity on the date received from NSCC.

In past UMC events with NSCC settlement, some intermediaries sent DCC&S activity for funds that were closed during the UMC on the first business day post-UMC. Those trades were effective as of the closed fund's previous business day (i.e., the last trade date prior to the UMC) and, therefore, DCC&S-eligible. However, with interim NSCC settlement occurring during the UMC, some fund systems were expecting all DCC&S-eligible trades for the previous business day to be received according to the recommended practice only (i.e., the morning of the first day of the UMC). Their system configuration precluded the processing of DCC&S activity with same-day settlement on the first business day post-UMC, for funds closed during the UMC. This underscores the critical need for **both intermediaries and funds** to **proactively** communicate their expectations of when they will submit and process DCC&S transactions during and immediately following a UMC event.

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<sup>43</sup> When a UMC event occurs, it may not be clear when the closed fund's next business day (e.g., T+1) will occur. If the NSCC is open during a UMC event, closed funds will need to evaluate all trade files received on each day of the UMC as if they were received for processing on the fund's next business day. In the case of DCC&S activity, this may mean that DCC&S eligible "previous business day" activity may be received by closed funds for processing and (if in good order) settlement on one or more calendar days.

On the evening of the first business day following a UMC event, there are often potential delays in determining fund NAVs, larger processing volumes, and other coordination issues that tend to extend the time needed by industry participants to complete nightly processing cycles. On the second business day following a UMC event, funds and intermediaries typically need two additional hours to complete the calculation and delivery of NAVs and to complete nightly processing cycles. Coordination and communication among industry participants, including funds, intermediaries, service providers, and the NSCC, are critical in moving expeditiously toward business as usual after a UMC event.

## AIP and SWP Transactions

AIP (purchase) and SWP (redemption) transactions are automated transactions that generally occur on a predetermined schedule selected by the shareholder. Money movement for these transactions typically occurs by ACH.

When a fund is closed during a UMC event, the system activities necessary to generate these NAV-dependent transactions will not occur. Funds will typically create all AIP and SWP transactions missed due to the UMC on the first business day following the UMC event. Transaction trade dates should be advanced accordingly to align with fund policies regarding AIP and SWP transactions.<sup>44</sup>

Retirement shareholders who contribute to their individual retirement account (IRA) through an AIP may be adversely affected if a UMC falls on a regulatory contribution deadline. Similarly, retirement shareholders with SWP transactions established to meet their required minimum distribution may also be adversely affected. Additionally, shareholders who use SWP transactions for bill payment activities may experience cash-flow or late payment issues because of the delayed processing. Funds, transfer agents, and intermediaries should consider reviewing for these limited-case scenarios, when applicable, and reaching out to shareholders to address any issues as appropriate.

Regulators often issue guidance and exemptive orders following a major disaster or events that can create financial hardship or consequences for shareholders. Funds, transfer agents, and intermediaries should monitor the SEC, Internal Revenue Service (IRS), and Department of Labor (DOL) closely for any relief or guidance issued.

## Other Automated Transactions

Funds receive transactions from other automated sources, including these:

- » Check-writing draft transactions
- » Payroll direct deposits
- » Bank or intermediary sweep transaction files
- » Other trading network transaction files transmitted directly to funds

It is important that funds analyze their internal and external business partner activities and related transaction processing effects to determine how to manage these activities during UMC events. This could become especially challenging when transaction files include activity for both open and closed funds during the UMC event.

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<sup>44</sup> Depending on the fund's processing rules and underlying system supporting AIP and SWP transaction creation, the transaction effective date could reflect the transaction creation date or it could be future-dated up to two business days.

When a fund is closed during a UMC event, automated transactions are often received with a current-date trade date. However, such transactions will be considered not in good order and rejected by the fund. Funds may choose a different course of action (rather than simply rejecting all transactions) by working with industry stakeholders on solutions that are appropriate for these unique arrangements and automated transaction processes. Previous UMC events suggest that funds should also confirm how they will settle non-NSCC transactions, especially those from other automated trading networks or proprietary file transmissions, as sometimes those transactions follow alternate settlement from NSCC or other fund-direct activity.

### **Telephone Transactions**

Call centers supporting shareholders and intermediaries often accept telephone purchase, redemption, or exchange transactions during a UMC event. For a fund that is closed, such transactions are effective using the next calculated NAV on the first business day that the fund reopens. Therefore, uncertainty over the funds reopening or their next trade date might exist for a period of time, affecting the funds' ability to immediately confirm shareholder and intermediary transactions received during the close. To avoid uncertainty or confusion, funds may also decide to suspend telephone transaction capabilities during fund closings. In any case, funds should modify call center scripting to address effects on telephone servicing during a UMC event.

Funds also use VRU solutions for servicing shareholders and intermediaries. The considerations detailed above would also apply to VRU activities. Customized scripting of VRU messages and the ability to support transaction capabilities during a UMC event should be reviewed to determine funds' desired course of action.

### **Web Transactions**

Funds, intermediaries, and shareholders have come to rely on internet-based trade processing of purchase, redemption, and exchange transactions. As the same uncertainties exist regarding the transaction effective date, funds might need to evaluate their ability to continue offering transactions through web portals, as with other transactions for funds closed during a UMC event. Web capabilities for shareholders and intermediaries to conduct account balance inquiries and other services should also be addressed. Funds should be prepared to clearly identify their web-supported capabilities during a UMC event.

### **Mail Transactions**

The United States Postal Service and other delivery services could be affected during a UMC event. Therefore, the processing effects for transactions and other account maintenance activities received by mail should be considered during a UMC event. Transactions received by mail would either be held or be processed and pended for posting on the first business day that the fund reopens following the UMC event. Consideration may also need to be given to staffing levels to handle higher volumes for multiple days if processing is delayed.

## Other Ad Hoc Activities

Throughout the year, funds may schedule a variety of activities that end up occurring during a UMC event, such as automatic class-to-class conversions, fund mergers, fund status changes (e.g., opening, soft closing), or interval fund repurchases.<sup>45</sup> In some instances, these activities are defined within a prospectus or governed by regulatory rulemaking and may require funds to consult with counsel regarding their options on how to proceed. Funds will need to communicate to both shareholders and key business partners how these activities will be managed during and after a UMC event, if applicable.

## Post-Event Considerations

As learned during previous UMC events, the effort spent on post-event activities may far exceed those of the event itself. Capacity to manage and complete the exception processing follow-up from the event may be compounded by the possibility of reduced staff, especially in the near term. Funds and intermediaries will need to remain in close communication about event-related activities as normal operations resume and cleanup is completed.

Task force members identified the following areas, among others, where post-event activities may increase for some time until the UMC event's effects are fully resolved:

- » Trade corrections, trade rejects, and requests for price protection may increase until all systems are updated with accurate NAVs and current balances.
- » Transfer corrections may increase, depending on how funds and intermediaries are able to manage ACATS transfers, especially ACATS acknowledgments during multiday UMC events.
- » Dividend accrual adjustments may be required on both the fund and shareholder levels. Funds should review and adjust accrual factors for material differences and communicate those changes through established procedures for rate correction.<sup>46</sup> Shareholder accounts may also require adjustment for accrual entitlements affected by daily NSCC settlement during a UMC event. Such activities may have cascading effects, especially if the accrual adjustment crosses a dividend or capital gains payout period and materially alters those entitlements, as well.
- » Shareholder awareness of the event and its effect on the fund may not be readily determined. In some instances, shareholders are unaffected. However, for those with trade or dividend corrections, call centers may experience greater volumes of shareholders requesting explanations about account activity following the distribution of periodic statements.

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<sup>45</sup> This list is not exhaustive.

<sup>46</sup> Funds will follow their policies and procedures for fund valuation and determining whether a material change is needed. Numerous operational approaches could be pursued if the fund identifies a material error in accrual processing. Funds will make independent business decisions when determining an appropriate response in their specific situation.

# Appendices

The following appendices provide additional tools and resources for fund companies when they are evaluating their course of action related to a UMC event. The appendices also include procedures for communicating information on fund activities during a UMC event to shareholders, intermediaries, and other business partners.

## Appendix A: Industry Resources

During a market close, industry associations, regulators, and the news media typically provide information that facilitates the planning process for fund companies and their service providers. The primary resources available to the industry related to the status of the various markets and effects include the following:

» **ICI Business Continuity Resource Center webpage:** [www.ici.org/continuity](http://www.ici.org/continuity)

This publicly available webpage is used by ICI to publish resources before, during, and after UMC events. It includes resource guides related to NAV delivery during emergencies, UMC events, and valuation, as well as links to key ICI contacts, industry groups, and regulators.

» **ICI:** [www.members.ici.org](http://www.members.ici.org)

The members-only section of ICI's website includes important committee rosters and work products that could prove beneficial during a UMC event. ICI committee members may access their committee's content through their ICI user ID (work email) and password.

Memorandum [29164](#) (dated July 10, 2015), titled *NYSE Halts, Resumes Trading; Available ICI Resources*, and Memorandum [29831](#) (dated April 12, 2016), titled *Evaluating Fund Policies, Procedures, and Disclosure in Light of Unanticipated Events on Securities Trading Venues*, provide important members-only information in response to an actual intraday business disruption that directly affected an exchange.

» **Bond Market:** [www.sifma.org](http://www.sifma.org)

The bond market might be open or closed depending on the type of UMC event. If counterparties choose to trade a fixed-income security, such activity could compel a fixed-income fund to open on a day that it would otherwise be closed. The Securities Industry and Financial Markets Association (SIFMA) often provides information to its members and the public on the recommended and current state of the bond markets.

» **Depository Trust & Clearing Corporation (DTCC):** [www.dtcc.com](http://www.dtcc.com)

The DTCC is the security industry's utility. Information on DTCC and NSCC mutual fund services can be found in the wealth management services/mutual fund services section of the DTCC website.

» **Federal Reserve:** [www.federalreserve.gov](http://www.federalreserve.gov)

The Federal Reserve System is the central bank of the United States. If not scheduled to be closed, the Federal Reserve will most likely be open. Depending on the location and nature of the event, however, the Federal Reserve might close a regional branch.

» **Financial Industry Regulatory Authority (FINRA):** [www.finra.org](http://www.finra.org)

FINRA works to protect investors by registering and educating all brokers, examining securities firms, writing the rules they must follow, and enforcing those rules and federal securities laws. FINRA also monitors trading in the US stock markets and administers the world's largest securities-related dispute resolution forum.

» **Internal Revenue Service (IRS):** [www.irs.gov](http://www.irs.gov)

The IRS is the US tax collection agency and administers the Internal Revenue Code, enacted by Congress. Any relief granted by the IRS as a result of a UMC event would be posted on this website.

» **National Association of Securities Dealers Automated Quotations (NASDAQ) market:** [www.nasdaq.com](http://www.nasdaq.com)

NASDAQ is an exchange company that operates markets, clearinghouses, and central securities depositories worldwide.

» **New York Stock Exchange (NYSE):** [www.nyse.com](http://www.nyse.com)

The NYSE is the largest equity exchange in the United States. The status of the NYSE, as well as plans to switch to automated trading through its electronic-only exchange, Arca, would be posted to its website during a UMC event.

» **Securities Industry and Financial Markets Association (SIFMA):** [www.sifma.org](http://www.sifma.org)<sup>47</sup> (for securities industry emergency information: [www.sifmaemergency.org](http://www.sifmaemergency.org))

SIFMA is the main trade association for the securities industry and plays a key role in communicating the status of markets to the industry.

» **US Department of the Treasury:** [www.treasury.gov](http://www.treasury.gov)

The Department of the Treasury is the executive agency responsible for promoting economic prosperity and ensuring the financial security of the United States. The department is responsible for a wide range of activities, such as advising the president on economic and financial issues, encouraging sustainable economic growth, and fostering improved governance in financial institutions.

» **US Postal Service (USPS):** [www.usps.com](http://www.usps.com)

The USPS is the primary mail delivery service in the United States. Veterans Day is an example of a holiday on which the USPS is closed and the markets are open. During UMC events, the USPS may have procedures for mail delivery that differ from those for pickup.

» **US Securities and Exchange Commission (SEC):** [www.sec.gov](http://www.sec.gov)

The SEC oversees the key participants in the US securities world, including securities exchanges, securities brokers and dealers, investment advisers, and mutual funds. The SEC promotes the disclosure of important market-related information, maintains fair dealing, and protects against fraud. It also works closely with many other institutions, including Congress, other federal departments and agencies, self-regulatory organizations (e.g., the stock exchanges), state securities regulators, and various private sector organizations.

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<sup>47</sup> The SIFMA website provides consolidated information on all exchanges and markets in the event of a national day of mourning or other UMC event.



## Appendix B: UMC Checklists

As an aid for mutual fund transfer agents, the Transfer Agent Advisory Committee’s UMC Task Force developed additional tools that could be helpful for transfer agents to complete, depending on the circumstances.

The two checklists included in this section describe steps that transfer agents might need to complete during a UMC event. The first checklist addresses an “anticipated” UMC event, when industry participants receive some advance notice. The second checklist addresses an “unanticipated” UMC event, when industry participants receive little or no advance notice.

### UMC Checklist—Advance Notice

Event	Date	Definitions
		UMC: Unexpected market close
		UMC (-1): Business day preceding the UMC event <sup>1</sup>
		UMC (+0): Day(s) during the UMC event
		UMC (+1): First business day following the UMC event

Complete	Date	Owner	Task
	UMC (-1)	Broker-dealer services	NSCC processing: For a full-day UMC, funds should confirm that the NSCC as-of order window rule is appropriately set for closed funds. The recommended practice is to set the value for at least one day greater than the anticipated length of the UMC.
	UMC (-1)	Corporate actions/ Operations	Fund close time: Confirm that appropriate fund close times are set across recordkeeping systems, applications, and utilities for all open funds as appropriate
	UMC (-1)	Corporate actions/ Operations	TA and ancillary system online date management: Update date management files, calendars, etc. (on transfer agent and related systems), to reflect impact of UMC event on closed funds if applicable.
	UMC (-1)	Funds	Communication: Establish or coordinate necessary communication with and among transfer agent(s), system provider(s), custodian, fund accounting agent, administrator, shareholders, vendors, and intermediaries.
	UMC (-1)	Funds	Fund status: Determine fund open and closed status and communicate to intermediaries, shareholders, and other business partners as appropriate.
	UMC (-1)	Funds	Closed fund daily accrual status: Determine which closed funds will calculate and disseminate a daily accrual rate on the UMC date(s) and communicate to intermediaries, shareholders, and other business partners as appropriate.
	UMC (-1)	Funds/Corporate actions	Corporate actions: Review currently scheduled corporate action events (dividends, capital gains, commissions, 12b-1 payments, proxy activities, etc.) and reschedule as appropriate.

<sup>1</sup> Assumes notification of an unexpected market closure is received by 1:00 p.m. on the business day prior to the actual UMC event.

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Complete	Date	Owner	Task
	UMC (-1)	IT/Systems	TA and ancillary system batch/back-end processing dates: Update TA system processing-date information to adjust for impact of UMC event on closed funds if applicable.
	UMC (-1)	IT/Systems	Transmissions: Confirm process for handling inbound/outbound transmissions. Special consideration may be needed if both open and closed funds are included in the same transmission.
	UMC (-1)	IT/Systems	Automatic purchases and withdrawals (system): Update triggered preauthorized check (PAC)/automatic investment plan (AIP) and systematic withdrawal plan (SWP) files to reflect correct trade date, as appropriate (move PAC/AIP/SWPs scheduled for UMC to UMC (+1)).
	UMC (-1)	Operations	Daily price-dependent processing routines: Review expected daily NAV processing routines (e.g., list bill, plan payroll, check-writing draft processing activity) and reschedule as appropriate. Special consideration might be needed if both open and closed funds are included in the same processing routine.
	UMC (-1)	Operations	Automatic purchases: Review PAC/AIP transactions currently in process and validate against open/closed funds on the UMC.
	UMC (+0)	Broker-dealer services	NSCC Processing—Fund/SERV and Networking: Review NSCC activity, including as-of orders, placements to open funds, transfers in shares, networking, etc. Reject to the NSCC any purchase, redemption, or exchange orders for closed funds with an effective date equal to the UMC date.
	UMC (+0)	Broker-dealer services	NSCC Processing—ACATS-Fund/SERV: Review ACATS-Fund/SERV activity for processing. Ensure that all ACATS transfer acknowledgments are processed by the transfer agent within two business days of receipt. <sup>2</sup>
	UMC (+0)	Control	Transaction settlement: Confirm that settlement transactions have processed appropriately through DTCC and other business partners if applicable.
	UMC (+0)	Corporate actions/ Operations	TA and ancillary system settings: Review processing rules on transfer agent system (e.g., fund master files, VRU, web processing) to confirm that flags and settings are correct for open and closed funds.
	UMC (+0)	IT/Operations	Overnight trade pending/suspense validation: Validate after-hours trades received and currently held in a suspended or pending status, due to fund close related to UMC, that have a valid trade date (e.g., UMC (-1)). Release from pending/suspended status as appropriate.
	UMC (+0)	Operations	Automatic purchases and withdrawals (transactions): Review SWP and PAC/AIP activity for any rejects due to a UMC-related fund closure; queue up for processing on UMC (+1).
	UMC (+0)	Operations	Overnight trading: Review late-day trade activity from UMC (-1); release for processing as appropriate.
	UMC (+0)	Operations	Federal funds wire/Automated Clearing House (ACH): Determine process to manage incoming and outgoing wires and ACH money movements. Special consideration might be needed for open versus closed funds.

<sup>2</sup> If unable to process ACATS-Fund/SERV transfer acknowledgments within the specified time frame, follow the exception processing transfer acknowledgment procedure outlined in the section on transfers (pages 17–19).

Complete	Date	Owner	Task
	UMC (+0)	Operations	Check-writing drafts: Ensure that drafts are handled appropriately. Special consideration might be needed for open versus closed funds.
<b>Repeat UMC (+0) tasks as necessary until next market open date.</b>			
	UMC (+1)	Control	Daily accrual: Review and confirm daily accrual calculations during UMC event. For funds that did not provide daily rates during UMC (+0), prepare multiday (bulk, multiday) rates for communication and dissemination through standard channels (Mutual Fund Profile I–Price/Rate, spreadsheet, etc.).
	UMC (+1)	Control	System transaction processing review: Validate that trades are processing correctly on the TA system. Special consideration should be given to “AM/PM” trades and any trades from UMC (+0).
	UMC (+1)	Corporate actions/ Operations	TA and ancillary system settings: Review processing rules on transfer agent system (e.g., fund master files, VRU, web processing) to confirm that flags and settings are correct for open and closed funds.
	UMC (+1)	Corporate actions/ Operations	TA and ancillary system online date management: Update date management files, calendars, etc. (on transfer agent and related systems) to reflect business as usual as appropriate.
	UMC (+1)	Corporate actions/ Operations	Fund close time: Confirm that appropriate fund close times are set across recordkeeping systems, applications, and utilities for all funds as appropriate.
	UMC (+1)	IT/Systems	Transmissions: Confirm appropriate handling/processing of inbound/outbound transmissions. Attention should be given to any transmissions subject to special handling during UMC (+0).
	UMC (+1)	IT/Systems	Automatic purchases and withdrawals (system): Review PAC/AIP and SWP files received/created during the UMC for appropriate processing.
	UMC (+1)	Operations	Overnight trade pending/suspense validation: Validate after-hours trades received and currently held in a suspended or pending status that have a valid trade date. Release from pending/suspended status as appropriate.
	UMC (+1)	Operations	Automatic purchases and withdrawals (processing): Confirm that SWP and PAC/AIP processing is active.

Note: Not all tasks will be applicable to all entities and UMC events. The checklist is not intended to be a comprehensive list of all actions necessary during a UMC event. The checklist is intended as a basis from which firms can create their own checklist as appropriate for their organization and structure.

## UMC Checklist—No Advance Notice

Event	Definitions
Date	<p>UMC: Unexpected market close</p> <p>UMC (-1): Business day preceding the UMC event<sup>1</sup></p> <p>UMC (+0): Day(s) during the UMC event</p> <p>UMC (+1): First business day following the UMC event</p>

Complete	Date	Owner	Task
	UMC (+0)	Broker-dealer services	NSCC Processing—Fund/SERV and Networking: Review NSCC activity, including as-of orders, placements to open funds, transfers in shares, networking, etc. Reject to the NSCC any purchase, redemption, or exchange orders for closed funds with an effective date equal to the UMC date.
	UMC (+0)	Broker-dealer services	NSCC Processing—ACATS-Fund/SERV: Review ACATS-Fund/SERV activity for processing. Ensure that all ACATS transfer acknowledgments are processed by the transfer agent within two business days of receipt. <sup>2</sup>
	UMC (+0)	Broker-dealer services	NSCC Processing: If a full-day UMC, funds should confirm that the NSCC as-of order window rule is appropriately set for closed funds. The recommended practice is to set the value for at least one day greater than the anticipated length of the UMC.
	UMC (+0)	Control	Transaction settlement: Confirm that settlement transactions have processed appropriately through DTCC and other business partners if applicable.
	UMC (+0)	Corporate actions/Operations	TA and ancillary system online date management: Update date management files, calendars, etc. (on transfer agent and related systems) to reflect impact of UMC event on closed funds if applicable.
	UMC (+0)	Corporate actions/Operations	Fund close time: Confirm that appropriate fund close times are set across recordkeeping systems, applications, and utilities for all open funds as appropriate.

<sup>1</sup> Assumes notification of the UMC is received prior to the beginning of the business day.

<sup>2</sup> If unable to process ACATS-Fund/SERV transfer acknowledgments within the specified time frame, follow the exception processing transfer acknowledgment procedure outlined in the section on transfers (pages 17–19).

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<b>Complete</b>	<b>Date</b>	<b>Owner</b>	<b>Task</b>
UMC (+0)	Funds		Communication: Establish or coordinate necessary communication with and among transfer agent(s), system provider(s), custodian, fund accounting agent, administrator, shareholders, vendors, and intermediaries.
UMC (+0)	Funds		Fund status: Determine fund open and closed status and communicate to intermediaries, shareholders, and other business partners as appropriate.
UMC (+0)	Funds		Closed fund daily accrual status: Determine which closed funds will calculate and disseminate a daily accrual rate on the UMC date(s) and communicate to intermediaries, shareholders, and other business partners as appropriate.
UMC (+0)	Funds/Corporate actions		Corporate actions: Review currently scheduled corporate action events (dividend, capital gains, commissions, 12b-1 payments, proxy activities, etc.) and reschedule as appropriate.
UMC (+0)	IT/Systems		TA and ancillary system batch /back-end processing dates: Update TA system processing-date information to adjust for impact of UMC event on closed funds, if applicable.
UMC (+0)	IT/Systems		Transmissions: Confirm process for handling inbound/outbound transmissions. Special consideration might be needed if both open and closed funds are included in the same transmission.
UMC (+0)	IT/Systems		TA and ancillary system settings: Review processing rules on transfer agent system (e.g., fund master files, VRU, web processing) to confirm that flags and settings are correct for open and closed funds.
UMC (+0)	IT/Systems		UMC (+0)-dated transaction updates for closed funds: Trades in closed funds with a trade date of UMC (+0) will need their trade dates advanced to UMC (+1)—which may be unknown. Determine the strategy to manage trades and then execute strategy.
UMC (+0)	IT/Systems		Automatic purchases and withdrawals (system): Update triggered preauthorized check (PAC)/automatic investment plan (AIP) and systematic withdrawal plan (SWP) files to reflect correct trade date as appropriate. (Move PAC/AIP/SWPs scheduled for UMC to UMC (+1).)
UMC (+0)	Operations		Overnight trade pending/suspense validation: Validate after-hours trades received and currently held in a suspended or pending status that have a valid trade date. Release from pending/suspended status as appropriate.
UMC (+0)	Operations		Daily price-dependent processing routines: Review expected daily price-dependent processing routines (e.g., list bill, plan payroll, check-writing draft processing activity) and reschedule as appropriate. Special consideration might be needed if both open and closed funds are included in the same processing routine.
UMC (+0)	Operations		Overnight trading: Review late-day trade activity from UMC (-1); release for processing as appropriate.
UMC (+0)	Operations		Federal funds wire/Automated Clearing House (ACH): Determine process to manage incoming and outgoing wires and ACH money movements. Special consideration might be needed for open versus closed funds.
UMC (+0)	Operations		Check-writing drafts: Ensure that drafts are handled appropriately. Special consideration might be needed for open versus closed funds.

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Complete	Date	Owner	Task
<b>Repeat UMC (+0) tasks as necessary until next market open date.</b>			
UMC (+1)	Control		Daily accrual: Review and confirm daily accrual calculations during UMC event. For funds that did not provide daily rates during UMC (+0), prepare multiday (bulk, multiday) rates for communication and dissemination through standard channels (Mutual Fund Profile I– Price/Rate, spreadsheet, etc.).
UMC (+1)	Control		System transaction processing review: Validate that trades are processing correctly on the TA system. Special consideration should be given to AM/PM trades and any trades from UMC (+0).
UMC (+1)	Corporate actions/ Operations		TA and ancillary system settings: Review processing rules on transfer agent system (e.g., fund master files, VRU, web processing) to confirm that flags and settings are correct for open and closed funds.
UMC (+1)	Corporate actions/ Operations		System transaction processing review: Validate that trades are processing correctly on the TA system. Special consideration should be given to AM/PM trades and any trades from UMC (+0).
UMC (+1)	Corporate actions/ Operations		Fund close time: Confirm that appropriate fund close times are set across recordkeeping systems, applications, and utilities for all funds as appropriate.
UMC (+1)	IT/Systems		Transmissions: Confirm appropriate handling/processing of inbound/outbound transmissions. Attention should be given to any transmissions subject to special handling during UMC (+0).
UMC (+1)	IT/Systems		Automatic purchases and withdrawals (system): Review PAC/AIP and SWP files received/created during the UMC for appropriate processing.
UMC (+1)	Operations		Overnight trade pending/suspense validation: Validate after-hours trades received and currently held in a suspended or pending status that have a valid trade date. Release from pending/suspended status as appropriate.
UMC (+1)	Operations		Automatic purchases and withdrawals (processing): Confirm that SWP and PAC/AIP processing is active.

Note: Not all tasks will be applicable to all entities and UMC events. The checklist is not intended to be a comprehensive list of all actions necessary during a UMC event. The checklist is intended as a basis from which firms can create their own checklist as appropriate for their organization and structure.

## Appendix C: UMC Processing Guide for Funds and Accrual Considerations

This UMC processing guide is intended to assist fund transfer agents and their service providers during a UMC event. The guide has been organized by key servicing areas and activities related to custody, fund accounting, and transfer agency. Suggested industry practices and guidelines for critical functions are outlined for processes that should be evaluated during a UMC event. The guide also incorporates additional discussion of divided accrual entitlements, including a “multiday accrual rate impact matrix,” which captures the effect a UMC event could have on activities related to dividend distribution.

### UMC Processing Guide for Funds

<b>Scenarios</b>	<b>Unscheduled closing (e.g., presidential day of mourning and Hurricane Sandy day 1)</b>	<b>Unscheduled closing (e.g., Hurricane Sandy day 2)</b>	<b>Scheduled holiday (e.g., Good Friday)</b>	<b>Scheduled holiday (e.g., Christmas, New Year’s)</b>	<b>Legend</b> CL = Closed OP = Open Partial = Open with reduced operating hours
<b>Status of exchanges, utility, and banks</b>	NYSE: CL Bond market: OP DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: Partial or CL DTCC: CL Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: CL Federal Reserve: CL	

<b>Key service areas/ activities</b>	<b>Industry practice<sup>1</sup></b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Comments</b>
<b>Custody</b>					
Cash settlement	Yes <sup>^</sup>	Yes <sup>^</sup>	Yes+	No	Yes <sup>^</sup> : Necessary to settle any prior-day transaction activity, CUSIPs with a valid trade date on UMC, and order settlement.  Yes+: If bond market is open and specific CUSIPs (typically money markets) define Good Friday or other known holiday as a valid trade date.
Staffing	Normal	Normal	Partial	Holiday levels	Staffing levels will vary by organization.

<sup>1</sup>An indication of “yes” under industry practice denotes that the applicable activity will be supported during a UMC event.

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<b>Scenarios</b>	Unscheduled closing (e.g., presidential day of mourning and Hurricane Sandy day 1)	Unscheduled closing (e.g., Hurricane Sandy day 2)	Scheduled holiday (e.g., Good Friday)	Scheduled holiday (e.g., Christmas, New Year's)	<b>Legend</b> <b>CL = Closed</b> <b>OP = Open</b> <b>Partial = Open with reduced operating hours</b>
<b>Status of exchanges, utility, and banks</b>	NYSE: CL Bond market: OP DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: Partial or CL DTCC: CL Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: CL Federal Reserve: CL	

<b>Key service areas/ activities</b>	<b>Industry practice<sup>1</sup></b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Comments</b>
<b>Fund accounting</b>					
Posting of cap stock activity	Yes <sup>^</sup>	Yes <sup>^</sup>	Yes+	No	Yes <sup>^</sup> : Necessary to book prior-day transaction activity, CUSIPs with a valid trade date on UMC, and order settlement.  Yes+: If bond market is open and specific CUSIPs (typically money markets) define Good Friday or other known holiday as a valid trade date.
NAV delivery to transfer agent	Yes <sup>^</sup>	Yes <sup>^</sup>	No	No	Yes <sup>^</sup> : Funds will disseminate NAVs only for open funds.
Rate delivery to transfer agent	Yes <sup>^</sup>	Yes <sup>^</sup>	No	No	Yes <sup>^</sup> : Industry practice is to deliver daily rates on UMC date(s) for all open and closed funds, corresponding with fund's typical use of multiday rates for weekends and previously scheduled holidays. <sup>2</sup> Refer to UMC accrual impact matrix for details on effects of missing daily rates.
Staffing	Normal	Normal	Partial	Holiday levels	Staffing levels will vary by organization.

<sup>1</sup> An indication of "yes" under industry practice denotes that the applicable activity will be supported during a UMC event.

<sup>2</sup> Alternative practice is to deliver a multiday rate that includes all UMC dates on the first day following the UMC and to separately deliver to intermediaries (by spreadsheet or other means) individual daily rates that make up the multiday rate.

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<b>Scenarios</b>	Unscheduled closing (e.g., presidential day of mourning and Hurricane Sandy day 1)	Unscheduled closing (e.g., Hurricane Sandy day 2)	Scheduled holiday (e.g., Good Friday)	Scheduled holiday (e.g., Christmas, New Year's)	<b>Legend</b> <b>CL = Closed</b> <b>OP = Open</b> <b>Partial = Open with reduced operating hours</b>
<b>Status of exchanges, utility, and banks</b>	NYSE: CL Bond market: OP DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: Partial or CL DTCC: CL Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: CL Federal Reserve: CL	

<b>Key service areas/ activities</b>	<b>Industry practice<sup>1</sup></b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Comments</b>
<b>Transfer agent</b>					
Delivery of capstock and custody data	Yes <sup>^</sup>	Yes <sup>^</sup>	Yes+	No	Yes <sup>^</sup> : Necessary to report prior-day transaction activity, CUSIPs with a valid trade date on UMC, and order settlement. Yes+: If bond market is open and specific CUSIPs (typically money markets) define Good Friday or other known holiday as a valid trade date.
Valid trade date	Yes	No	Yes	No	Yes for certain CUSIPs. NAV delivery is required to process transactions for CUSIPs where UMC or Good Friday (or other known holiday) is a valid trade date.
Settlement of transactions	Yes <sup>^</sup>	Yes <sup>^</sup>	No	No	Yes <sup>^</sup> : All CUSIPs will allow settlement of prior orders. A rate is required by the transfer agent to accrue properly for transactions in CUSIPs where the UMC is deemed a valid trade date or for transaction settlement for prior trade date-orders in applicable accrual CUSIPs. Refer to UMC accrual impact matrix for detail on effect of missing daily rates.
NAV delivery to DTCC	Yes <sup>^</sup>	Yes <sup>^</sup>	No	No	Yes <sup>^</sup> : The TA will disseminate NAVs only for open funds.
Rate delivery to DTCC	Yes <sup>^</sup>	Yes <sup>^</sup>	No	No	Yes <sup>^</sup> : Industry practice is to deliver daily rates on UMC date(s) for all open and closed funds, corresponding with fund's typical use of multiday rates for weekends and previously scheduled holidays. <sup>2</sup> Refer to UMC accrual impact matrix for detail on effect of missing daily rates.

<sup>1</sup> An indication of "yes" under industry practice denotes that the applicable activity will be supported during a UMC event.

<sup>2</sup> Alternative practice is to deliver a multiday rate that includes all UMC dates on the first day following the UMC and to separately deliver to intermediaries (by spreadsheet or other means) individual daily rates that make up the multiday rate.

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<b>Scenarios</b>	Unscheduled closing (e.g., presidential day of mourning and Hurricane Sandy day 1)	Unscheduled closing (e.g., Hurricane Sandy day 2)	Scheduled holiday (e.g., Good Friday)	Scheduled holiday (e.g., Christmas, New Year's)	<b>Legend</b> <b>CL = Closed</b> <b>OP = Open</b> <b>Partial = Open with reduced operating hours</b>
<b>Status of exchanges, utility, and banks</b>	NYSE: CL Bond market: OP DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: Partial or CL DTCC: CL Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: CL Federal Reserve: CL	

<b>Key service areas/ activities</b>	<b>Industry practice<sup>1</sup></b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Comments</b>
Processing of Fund/SERV orders and exchanges	Yes <sup>^</sup>	Yes <sup>^</sup>	No	No	<p>Yes<sup>^</sup>: All orders and exchanges with valid trade dates (including DCC&amp;S and other as-of orders) should be processed for all open and closed funds.</p> <p>All other orders and exchanges should be rejected back to the NSCC (and subsequently to the intermediary) with Reason Code 016 (invalid trade date). Intermediaries will otherwise hold and (re)submit orders and exchanges with valid trade dates following the UMC.</p>
Processing of ACATS-Fund/SERV activity	Yes <sup>^</sup>	Yes <sup>^</sup>	No	No	<p>Yes<sup>^</sup>: Industry practice is to process all ACATS-Fund/SERV transfers for open and closed funds and complete related share aging and tax lot movement upon receipt of the transfer instructions. If the transfer agent system is unable to fully process the transfers, the transfer agent should provide transfer acknowledgment records (019) for each transfer within two business days of receipt of the transfer.<sup>3</sup></p>

<sup>1</sup> An indication of “yes” under industry practice denotes that the applicable activity will be supported during a UMC event.

<sup>3</sup> Alternative practice is to hold all transfers for processing by the fund on the first business day following the UMC and, if transfer acknowledgment records cannot be separately generated within two business days of receipt, provide a spreadsheet report to the intermediary of these transfers, which will require manual resolution by the intermediary. (See the section on exception processing, page 19.)

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<b>Scenarios</b>	Unscheduled closing (e.g., presidential day of mourning and Hurricane Sandy day 1)	Unscheduled closing (e.g., Hurricane Sandy day 2)	Scheduled holiday (e.g., Good Friday)	Scheduled holiday (e.g., Christmas, New Year's)	<b>Legend</b> <b>CL = Closed</b> <b>OP = Open</b> <b>Partial = Open with reduced operating hours</b>
<b>Status of exchanges, utility, and banks</b>	NYSE: CL Bond market: OP DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: Partial or CL DTCC: CL Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: CL Federal Reserve: CL	

<b>Key service areas/ activities</b>	<b>Industry practice<sup>1</sup></b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Comments</b>
Web availability	Yes <sup>^</sup>	Yes+	Yes <sup>^</sup>	Yes+	Yes <sup>^</sup> : Available for transaction processing for CUSIPs with a valid trade date and inquiry for all CUSIPs. Yes+: Available for inquiry only.
Periodic distributions—record date	No	No	No	No	Move to first business day post-UMC.
Periodic distributions—ex-date	No	No	No	No	Move to first business day post-UMC or record date +1 if record date falls on or during UMC.
Accrual distributions—end-of-period payment date	No	No	No	No	Move to first business day post-UMC.

<sup>1</sup>An indication of “yes” under industry practice denotes that the applicable activity will be supported during a UMC event.

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<b>Scenarios</b>	<b>Unscheduled closing (e.g., presidential day of mourning and Hurricane Sandy day 1)</b>	<b>Unscheduled closing (e.g., Hurricane Sandy day 2)</b>	<b>Scheduled holiday (e.g., Good Friday)</b>	<b>Scheduled holiday (e.g., Christmas, New Year's)</b>	<b>Legend</b> CL = Closed OP = Open Partial = Open with reduced operating hours
<b>Status of exchanges, utility, and banks</b>	NYSE: CL Bond market: OP DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: Partial or CL DTCC: CL Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: CL Federal Reserve: CL	

<b>Key service areas/ activities</b>	<b>Industry practice<sup>1</sup></b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Comments</b>
Inbound and outbound federal funds wire/ Automated Clearing House (ACH)	Yes <sup>^</sup>	Yes <sup>^</sup>	Yes <sup>^</sup>	No	Yes <sup>^</sup> : Normal payment process related to prior business day transactions and CUSIPs where UMC or Good Friday (or other known holiday) is considered a valid trade date. Inbound wires/ACH may be received for closed funds and require special handling.
Redemption checks	Yes <sup>^</sup>	Yes <sup>^</sup>	Yes <sup>^</sup>	No	Yes <sup>^</sup> : Refers to delivery of redemption checks to the United States Post Office.
Deposit checks	Yes <sup>^</sup>	Yes <sup>^</sup>	Yes <sup>^</sup>	No	Yes <sup>^</sup> : All checks are deposited. However, posting of transactions to accounts will occur only for CUSIPs where UMC or Good Friday (or other known holiday) is considered a valid trade date (where an NAV is calculated).
Check issued and paid files	Yes	Yes	Yes	No	Availability should coincide with Federal Reserve operation.
12b-1 accrual	Yes	Yes	Yes	Yes	Transaction settlement on UMC and UMC/ Good Friday in CUSIPs with a valid trade date should cause accrual of 12b-1 to begin (purchase) or end (redemption).
12b-1 payment	No	No	No	No	Move to first business day post-UMC.
Commission payment	No	No	No	No	Move to first business day post-UMC.
Proxy record date	No	No	No	No	Move to first business day post-UMC.

<sup>1</sup> An indication of “yes” under industry practice denotes that the applicable activity will be supported during a UMC event.

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<b>Scenarios</b>	<b>Unscheduled closing (e.g., presidential day of mourning and Hurricane Sandy day 1)</b>	<b>Unscheduled closing (e.g., Hurricane Sandy day 2)</b>	<b>Scheduled holiday (e.g., Good Friday)</b>	<b>Scheduled holiday (e.g., Christmas, New Year's)</b>	<b>Legend</b> <b>CL = Closed</b> <b>OP = Open</b> <b>Partial = Open with reduced operating hours</b>
<b>Status of exchanges, utility, and banks</b>	<b>NYSE: CL</b> <b>Bond market: OP</b> <b>DTCC: OP</b> <b>Federal Reserve: OP</b>	<b>NYSE: CL</b> <b>Bond market: CL</b> <b>DTCC: OP</b> <b>Federal Reserve: OP</b>	<b>NYSE: CL</b> <b>Bond market: Partial or CL</b> <b>DTCC: CL</b> <b>Federal Reserve: OP</b>	<b>NYSE: CL</b> <b>Bond market: CL</b> <b>DTCC: CL</b> <b>Federal Reserve: CL</b>	

<b>Key service areas/ activities</b>	<b>Industry practice<sup>1</sup></b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Comments</b>
Preauthorized checks (PACs) and automatic investment plans (AIPs)	Yes <sup>^</sup>	No	Yes <sup>^</sup>	No	Yes <sup>^</sup> : Process in funds where UMC and Good Friday (or other known holiday) are considered valid trade dates. Advance trade date for funds closed on UMC to first business day following UMC.
Systematic withdrawal plans (SWPs)	Yes <sup>^</sup>	No	Yes <sup>^</sup>	No	Yes <sup>^</sup> : Process in funds where UMC or Good Friday (or other known holiday) is considered a valid trade date. Advance trade date for funds closed on UMC to first business day following UMC.
Preparation and delivery of output (529, DSA, DSP, SPAC)	Yes <sup>^</sup>	Yes <sup>^</sup>	No <sup>^</sup>	No <sup>^</sup>	Yes <sup>^</sup> : Pre-UMC output from nightly processing will be delivered on the first day of UMC, unless the receiving organization (e.g., DTCC) is closed. Output is then delivered on the first business day following closure. SPAC output is considered critical and should be prepared and delivered during UMC for all open and closed funds. Other output has been deemed of secondary importance, meaning post-UMC preparation and delivery is permissible. No <sup>^</sup> : Prescheduled holiday output from nightly processing will be held for delivery on the first business day following closure. (Note that Saturday is considered a business day for certain NSCC Networking activity.)
Networking files (new account, transfer, maintenance, activity, position, dividend)	Yes <sup>^</sup>	Yes <sup>^</sup>	No	No	Yes <sup>^</sup> : Pre-UMC output from nightly processing will be delivered the first day of UMC. Listed record types are considered critical and should be prepared and delivered during UMC.

<sup>1</sup> An indication of “yes” under industry practice denotes that the applicable activity will be supported during a UMC event.

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<b>Scenarios</b>	Unscheduled closing (e.g., presidential day of mourning and Hurricane Sandy day 1)	Unscheduled closing (e.g., Hurricane Sandy day 2)	Scheduled holiday (e.g., Good Friday)	Scheduled holiday (e.g., Christmas, New Year's)	<b>Legend</b> <b>CL = Closed</b> <b>OP = Open</b> <b>Partial = Open with reduced operating hours</b>
<b>Status of exchanges, utility, and banks</b>	NYSE: CL Bond market: OP DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: OP Federal Reserve: OP	NYSE: CL Bond market: Partial or CL DTCC: CL Federal Reserve: OP	NYSE: CL Bond market: CL DTCC: CL Federal Reserve: CL	

<b>Key service areas/ activities</b>	<b>Industry practice<sup>1</sup></b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Industry practice</b>	<b>Comments</b>
United States Postal Service	Yes	Yes	Yes	Yes	<p>During past UMC events, the Postal Service has been open. Firms should confirm whether the Postal Service will be open and operating as normal. For example, during the National Day of Mourning for President Ford in 2007, the Postal Service did not deliver mail but allowed businesses to pick up their mail.</p> <p>Note: Transaction requests that are not delivered by the Postal Service to the servicing location or that were not picked up by the service provider (or transfer agent) will not be considered as received by the transfer agent.</p>
Tax and remittance reporting	Yes	Yes	No	No	
Call center operations	Yes <sup>^</sup>	Yes <sup>^</sup>	Yes <sup>^+</sup>	No <sup>^</sup>	<p>Yes<sup>^</sup>: Implement applicable scripting changes.</p> <p>Yes<sup>+</sup>: Consideration based on fund request.</p>
Staffing	Normal	Normal	Partial	Holiday levels	Staffing levels will vary by organization.

<sup>1</sup> An indication of "yes" under industry practice denotes that the applicable activity will be supported during a UMC event.

## Accrual Considerations

Industry practice is to provide daily accrual rates throughout the market close for both open and closed funds. This permits the most accurate determination of accrual entitlement and is essential for orders or transactions that settle in closed funds during a UMC event. Fund and intermediary systems have many different attributes, however, that may result in the need to adjust accruals earned by shareholders. For example, it is possible that the source of trade (e.g., fund-direct, NSCC, etc.) may accrue differently.

Experience during past UMC events indicates that accrual entitlement during a UMC event with daily settlement continues to create significant challenges with post-UMC event reconciliation and correction. The following information highlights various accrual considerations, including the application of a multiday vs. daily rates during or immediately following a UMC event as well as identifying attributes to consider when determining and reconciling accrual entitlement.

*Multiday accrual rate impact matrix:* The matrix that follows illustrates the consequences of providing a multiday rate in lieu of a daily rate, assuming a three-day UMC event. The day of the week that the UMC occurs and the fund's accrual policy could also affect calculations for rates used.<sup>48</sup>

Transaction type	Date on which transaction settlement occurs				First business day post- UMC (multiday/bulk rate)
	UMC (-1)	UMC (+0) Day 1	UMC (+0) Day 2	UMC (+0) Day 3	
Direct purchase/ purchase order settlement— <i>a.m.</i>	<b>No accrual impact</b> Shareholder accrual will be brought current on the next business day.	<b>No accrual impact</b> Shareholder accrual will be brought current on the next business day.	<b>Over-accrue one day</b> Shareholder will receive accrual for UMC day 1 to which he/she is not entitled.	<b>Over-accrue two days</b> Shareholder will receive accrual for UMC day 1 and day 2 to which he/she is not entitled.	<b>Over-accrue three days</b> Shareholder will receive accrual for UMC day 1, day 2, and day 3 to which he/she is not entitled.
Direct purchase/ purchase order settlement— <i>p.m.</i>	<b>No accrual impact</b> Shareholder accrual will be brought current on the next business day.	<b>Over-accrue one day</b> Shareholder will receive accrual for UMC day 1 to which he/she is not entitled.	<b>Over-accrue two days</b> Shareholder will receive accrual for UMC day 1 and day 2 to which he/she is not entitled.	<b>Over-accrue three days</b> Shareholder will receive accrual for UMC day 1, day 2, and day 3 to which he/she is not entitled.	<b>No accrual impact</b> Shareholder accrual begins on the next business day.

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<sup>48</sup> This table assumes an unanticipated UMC. With an anticipated UMC (e.g., a presidential day of mourning), some asset managers may provide daily rates on each UMC date OR a multiday/bulk rate on the business day prior to the UMC, resulting in results different from those in this table.

Transaction type	Date on which transaction settlement occurs					First business day post- UMC (multiday/bulk rate)
	UMC (-1)	UMC (+0) Day 1	UMC (+0) Day 2	UMC (+0) Day 3		
Direct redemption/redemption order settlement— a.m.	<b>No accrual impact</b> Shareholder accrual will be brought current on the next business day.	<b>No accrual impact</b> Shareholder accrual will end as of the prior business day.	<b>Under-accrue one day</b> Shareholder will not receive accrual for UMC day 1 to which he/she is entitled.	<b>Under-accrue two days</b> Shareholder will not receive accrual for UMC day 1 and day 2 to which he/she is entitled.	<b>Under-accrue three days</b> Shareholder will not receive accrual for UMC day 1, day 2, and day 3 to which he/she is entitled.	
Direct redemption/redemption order settlement— p.m.	<b>No accrual impact</b> Shareholder accrual will be brought current on the next business day.	<b>Under-accrue one day</b> Shareholder will not receive accrual for UMC day 1 to which he/she is entitled.	<b>Under-accrue two days</b> Shareholder will not receive accrual for UMC day 1 and day 2 to which he/she is entitled.	<b>Under-accrue three days</b> Shareholder will not receive accrual for UMC day 1, 2, and 3 to which he/she is entitled.	<b>No accrual impact</b> Shareholder accrual will end on this business day.	

*Effect of daily settlement during a UMC on accrual entitlement:* As the Multiday Accrual Rate Impact Matrix illustrates, cash settlement on a nonbusiness day for a closed fund may create an accrual entitlement issue for accounts with trades settling during the UMC.<sup>49</sup> The following identifies some of the factors that should be considered in reconciling accrual entitlements, especially for accounts in closed funds with settling trades during a UMC event.

- » Type of transaction: The accrual eligibility of transactions that credit shares to an account (e.g., purchase) is typically different from those that debit shares from an account (e.g., redemption). Other factors, such as source of transaction or time of day of the transaction, might also need to be considered.
- » Source of transaction: In some instances, orders or transactions processed directly with the fund may have different accrual eligibility than those received through NSCC, other trading networks, or other sources (e.g., proprietary file transmissions, retail shareholder websites).
- » Time of day of transaction: Some funds, especially money market and fixed-income products, may observe a trading cutoff time earlier in a day that affects settlement timing and accrual entitlement. This is often referred to as “AM/PM” or “pay on credit/pay on debit” functionality.
  - » In general, “AM” or “pay on credit” functionality means that shares acquired begin accruing interest on the transaction settlement date and shares sold stop accruing interest on the transaction trade date.
  - » With “PM” or “pay on debit” functionality, shares acquired begin accruing interest on the first day following transaction settlement, and shares sold stop accruing interest on the transaction settlement date.
  - » In general, funds not specifically designating the midday trading cutoff in their prospectuses or other fund documents function as “PM” or “pay on debit” funds.

<sup>49</sup> Dividend accrual for accounts without transaction activity during a UMC event should not be affected.



- » Capabilities of shareholder recordkeeping system: It is relatively new in the mutual fund industry for transactions to settle on a day that a fund is closed. This is the result of the decision for DTCC to remain open and “business as usual” during an unexpected market close. Shareholder recordkeeping systems have been adapting and will continue to adapt to support this business need.<sup>50</sup> The following section highlights some common recordkeeping system considerations that may be pertinent in the determination of accrual entitlements:
  - » *Recognizing “closed with settlement” status when calculating accrual:* Many fund systems automatically calculate accrual entitlement based on a historical assumption that settlement (that typically determines when shares begin or stop dividend accrual) only occurs when a fund is open for trading. For closed funds during a UMC with daily NSCC settlement, accrual entitlement may change on an account with a settled trade while the fund is closed. Fund systems that do not recognize a “closed with settlement” status when determining accrual entitlements may not be able to automatically calculate correct accrual earned in some instances.<sup>51</sup>
  - » *Use of single-day vs. multiday rates:* As described in the Dividend/Accrual Activity section (page 11) of this guide, some funds are not able to provide—and intermediaries are not able to apply—single-day rates to closed funds during a UMC event. The intermediaries must receive a multiday rate on either side of a UMC event—preferably provided before an anticipated UMC like a presidential day of mourning. Depending on timing, duration, and types or attributes of the transactions that settle during a UMC event, it is probable that single-day factors will be required to adjust accrual for some transactions/accounts.<sup>52</sup> Such accrual adjustments may need to be first calculated outside of the recordkeeping system and subsequently applied to each affected account.
  - » *Increased resource allocation for accrual reconciliation:* Based on potential volume of accrual adjustments, some may find it necessary to allocate additional staff to complete timely correction of accrual entitlements on both fund-direct accounts and in support of intermediaries reconciling omnibus positions. Resource allocation may also depend on the timing of the UMC versus accrual payment dates or end-of-period reporting to shareholders (e.g., quarterly or annual statements).

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<sup>50</sup> Operators of shareholder recordkeeping systems make independent business decisions regarding when and how to modify their systems in response to settlement capabilities for funds closed for trading.

<sup>51</sup> Factors such as the days of the week when a UMC event happens, its duration, and the types and attributes of transactions processed may contribute to the overall success in automatically calculating correct accrual entitlements.

<sup>52</sup> The recommended practice for funds that provide a multiday accrual rate for UMC dates is to also provide a spreadsheet of single-day rates applicable to each UMC date. Additional details are available in the Dividend/Accrual Activity section (page 11) of this guide.

## Appendix D: ACATS-Fund/SERV Transfers—Additional Information

ACATS-Fund/SERV transfers create complex and unique challenges to manage during and immediately after a UMC event. There are two types of ACATS transfer transactions:

- » ACATS transfers between two intermediaries that are designed to reregister fund shares from one intermediary to another on a predetermined settlement date
- » ACATS PTF transfers between intermediaries and funds that are designed to reregister fund shares between the two parties on a predetermined settlement date

ACATS transfers take three to five business days to complete. The transfer is initiated by the intermediary in the ACATS system and processed by the fund through the ACATS-Fund/SERV system, and settlement is completed for intermediaries in the ACATS system. A transfer of a single brokerage customer account may involve multiple mutual fund positions that transfer. Once an ACATS transfer is in progress, it is not possible to alter (lengthen) the predetermined settlement cycle. Therefore, during a UMC event, numerous ACATS-Fund/SERV transfers are already “in-flight” and pending settlement. The industry goal is to settle all ACATS transfers on originally scheduled settlement dates to avoid manual processing and negative downstream effects.

Under normal conditions, mutual funds receive and process ACATS-Fund/SERV transfers prior to the actual ACATS settlement by acknowledging, rejecting, or suspending transactions through an NSCC Fund/SERV 019 record. If a fund does not acknowledge an ACATS-Fund/SERV transfer within two business days of receipt (business days are defined by the NSCC operating calendar), the mutual fund portion of the ACATS transfer “fails” or rejects. In the event of a transfer reject or fail, intermediaries must complete the mutual fund transfer by submitting a Networking B52 record (recommended practice) or manual instructions to the fund. Manually processing transfers is time-consuming, inefficient, and costly, and creates a variety of downstream effects for funds, intermediaries, and shareholders.

## Effects of Delayed or Rejected Transfers

- » *Firm/fund effects.* For any transfer that does not settle as scheduled, intermediaries must complete additional work to resolve that failed position. In addition, they have a regulatory responsibility to resolve these failed positions within a timely manner. To resolve a rejected or failed mutual fund, intermediaries must generate a Networking B52 (best practice) or send manual transfer instructions for the fund to process the movement of shares. The assets are frozen (unable to be traded) by the delivering firm, pending the movement of shares by the fund company, and the ACATS system completes a mutual fund cleanup (MFC) that also cleans up any collateral at the DTCC that is tied to the position. This requires additional time and resources on both sides to ensure that assets and collateral remain in balance. A related concern is the financing of outstanding collateral while the transfer remains outstanding.
- » *Client effects.* Shareholders are negatively affected when an ACATS transfer is initiated but not settled in a timely manner. If an ACATS mutual fund transfer of shares rejects and must be completed by Networking B52 or manually, the time frame in which a shareholder is unable to gain access to the shares is substantially increased. Both the delivering and receiving firms freeze the customer's position upon transfer initiation, pending the transfer's completion and execution of the MFC process. The shareholder cannot access frozen assets, even though his or her position is still invested with the fund. This creates market risk and opportunity cost for the customer.

Historically, the ability for funds to acknowledge and process ACATS-Fund/SERV transfers has been linked directly to the fund's transfer agent system execution of a nightly processing cycle.<sup>53</sup> If funds are closed during a UMC event, nightly processing cycles may not be executed. Therefore, ACATS-Fund/SERV transfer acknowledgments, which depend on a nightly processing cycle, may not be produced, and all "in-flight" ACATS-Fund/SERV transfers during the UMC event must be appropriately addressed to avoid fails and manual processing.<sup>54</sup> Funds using a transfer agent system that cannot systematically acknowledge ACATS-Fund/SERV transfers within two days of receipt by a closed fund should implement the exception processing for ACATS-Fund/SERV acknowledgments outlined in the main body of this paper.

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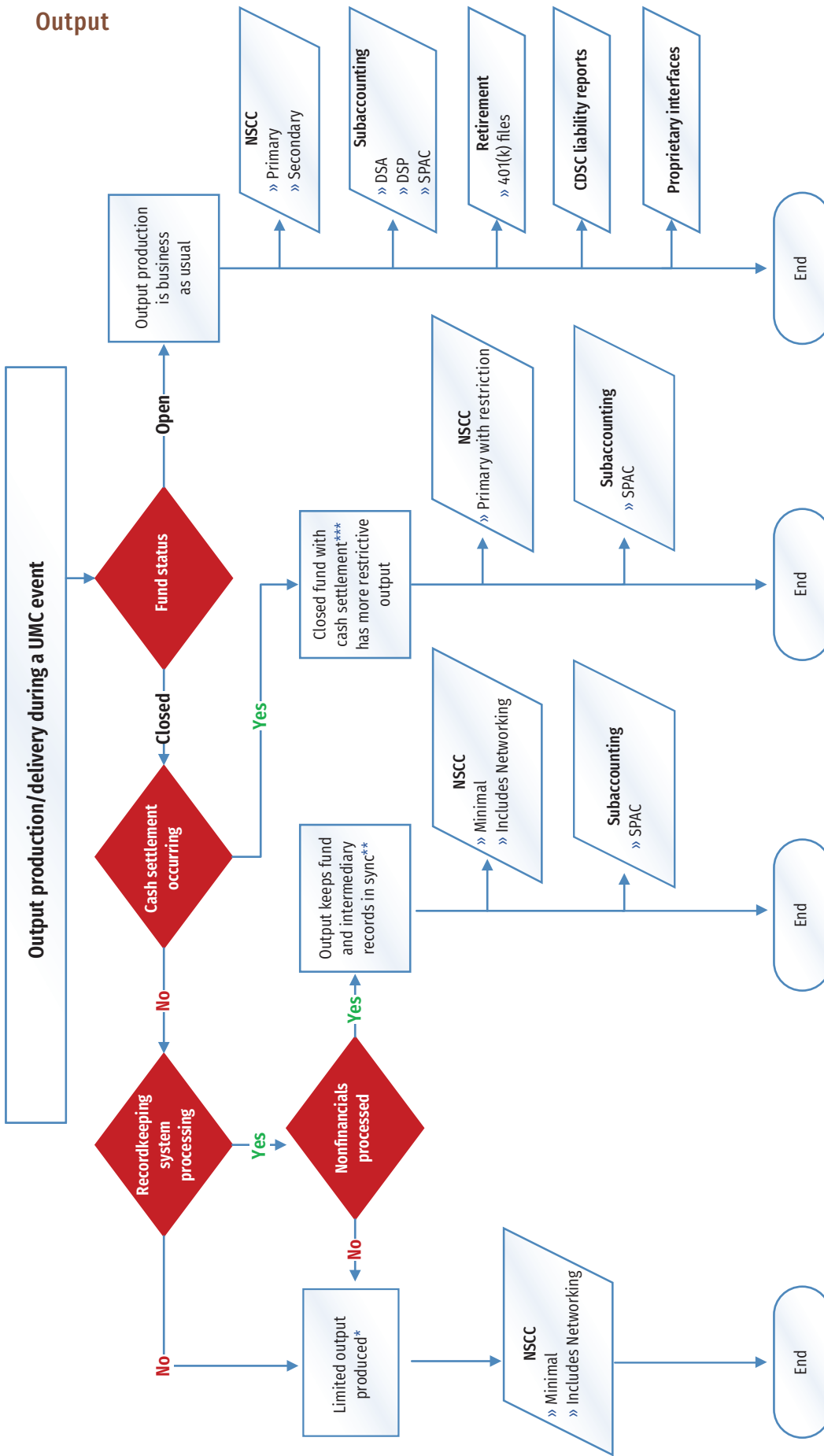
<sup>53</sup> A number of fund transfer agents operating proprietary systems and service providers have already taken steps to decouple ACATS-Fund/SERV acknowledgment from nightly processing cycle execution to ensure production during a UMC event.

<sup>54</sup> Because funds have two business days following receipt to acknowledge an ACATS-Fund/SERV transfer, a UMC event lasting one day should allow most funds to successfully acknowledge ACATS-Fund/SERV transfers systematically.

## Appendix E: Output, Transaction, and Transfer Processing Flows During a UMC Event

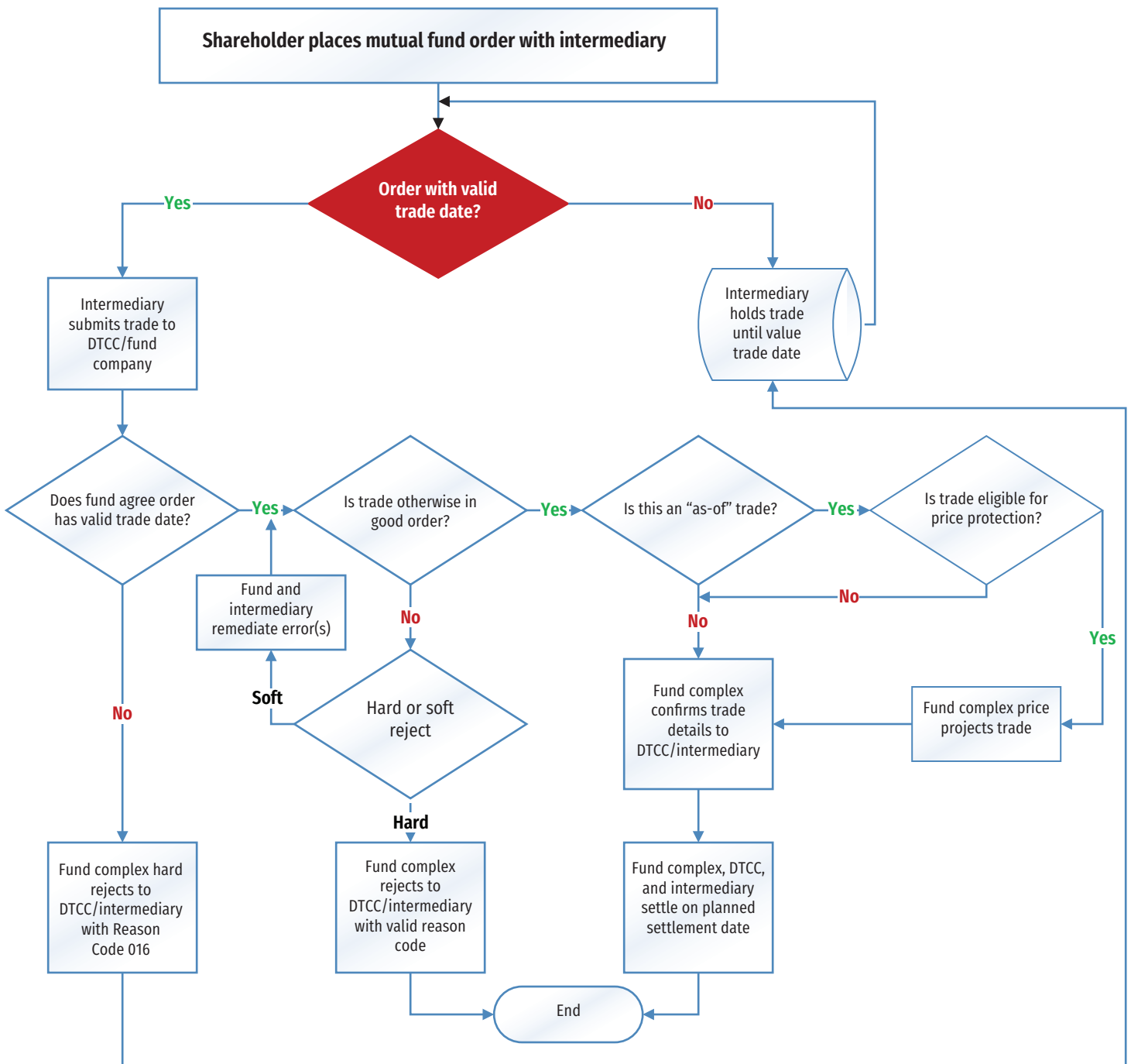
The following pages illustrate high-level workflow considerations for output, transactions, and transfers processed during a UMC event. This documentation is provided as an additional resource to aid in understanding how each process flow is affected during a UMC event.

# Output

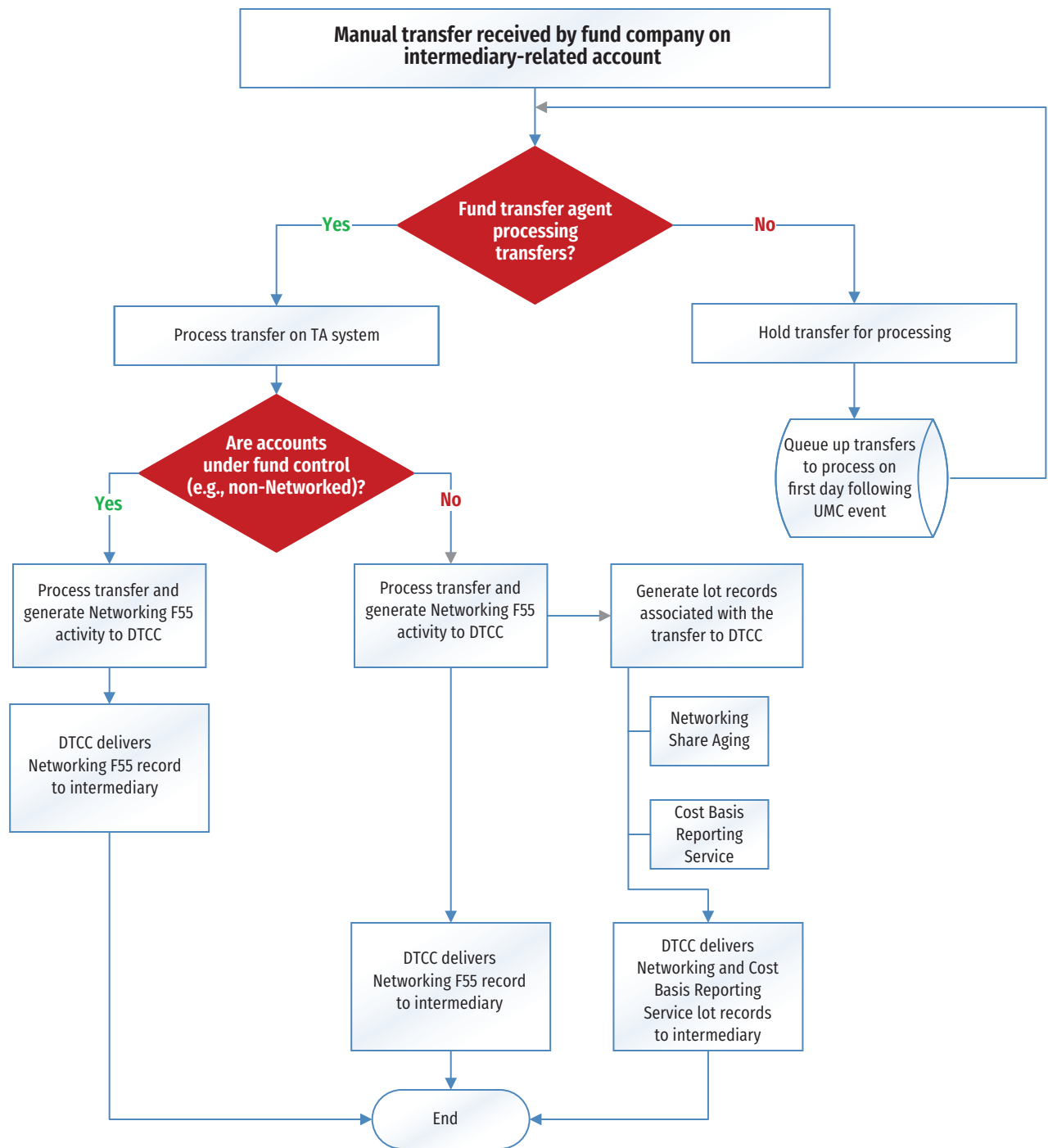


* Limited output produced	** Keep fund/intermediary in sync	*** Closed funds with cash settlement	NSCC-Primary	NSCC-Secondary
<ul style="list-style-type: none"> <li>» Fund/SERV orders and exchanges with invalid trade dates are rejected back to NSCC during UMC.</li> <li>» ACATS-Fund/SERV transfers acknowledged or rejected within two business days of receipt.</li> <li>» Daily accrual rates should be reported through MFPS I.</li> <li>» Changes to periodic distribution information should be reported through MFPS II.</li> <li>» With no processing cycle and/or no nonfinancial transactions processed, any output is held until the first business day following the UMC event.</li> </ul>	<ul style="list-style-type: none"> <li>» Fund/SERV orders and exchanges with invalid trade dates are rejected back to NSCC during UMC.</li> <li>» ACATS-Fund/SERV transfers acknowledged or rejected within two business days of receipt.</li> <li>» Daily accrual rates should be reported through MFPS I.</li> <li>» Changes to periodic distribution information should be reported through MFPS II.</li> <li>» Include Networking/SPAC activity that is necessary to keep fund and intermediary accounts in sync (manual transfers for accrual impact, social code updates, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>» Fund/SERV orders and exchanges with invalid trade dates are rejected back to NSCC during UMC.</li> <li>» ACATS-Fund/SERV transfers acknowledged or rejected within two business days of receipt.</li> <li>» Networking nonfinancial and transfer activity should be processed and reported.</li> <li>» Daily accrual rates should be reported through MFPS I.</li> <li>» Changes to periodic distribution information should be reported through MFPS II.</li> <li>» SPAC activity/position associated with processed activity should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>» Fund/SERV</li> <li>» ACATS-Fund/SERV</li> <li>» Networking</li> <li>» New account</li> <li>» Transfer</li> <li>» Maintenance</li> <li>» Position</li> <li>» Activity</li> <li>» Dividend</li> <li>» MFPS I-Price/Rate</li> <li>» MFPS II-Distribution Declaration</li> </ul>	<ul style="list-style-type: none"> <li>» Omni/SERV Activity and Position</li> <li>» 529 Plan Aggregator File</li> <li>» Payment aXis-Commission and Invoicing</li> <li>» Retirement Plan Reporting</li> <li>» Standardized Data Reporting</li> <li>» Share Aging</li> <li>» MFPS I-Security Database</li> <li>» DTCC Cost Basis Reporting</li> </ul>

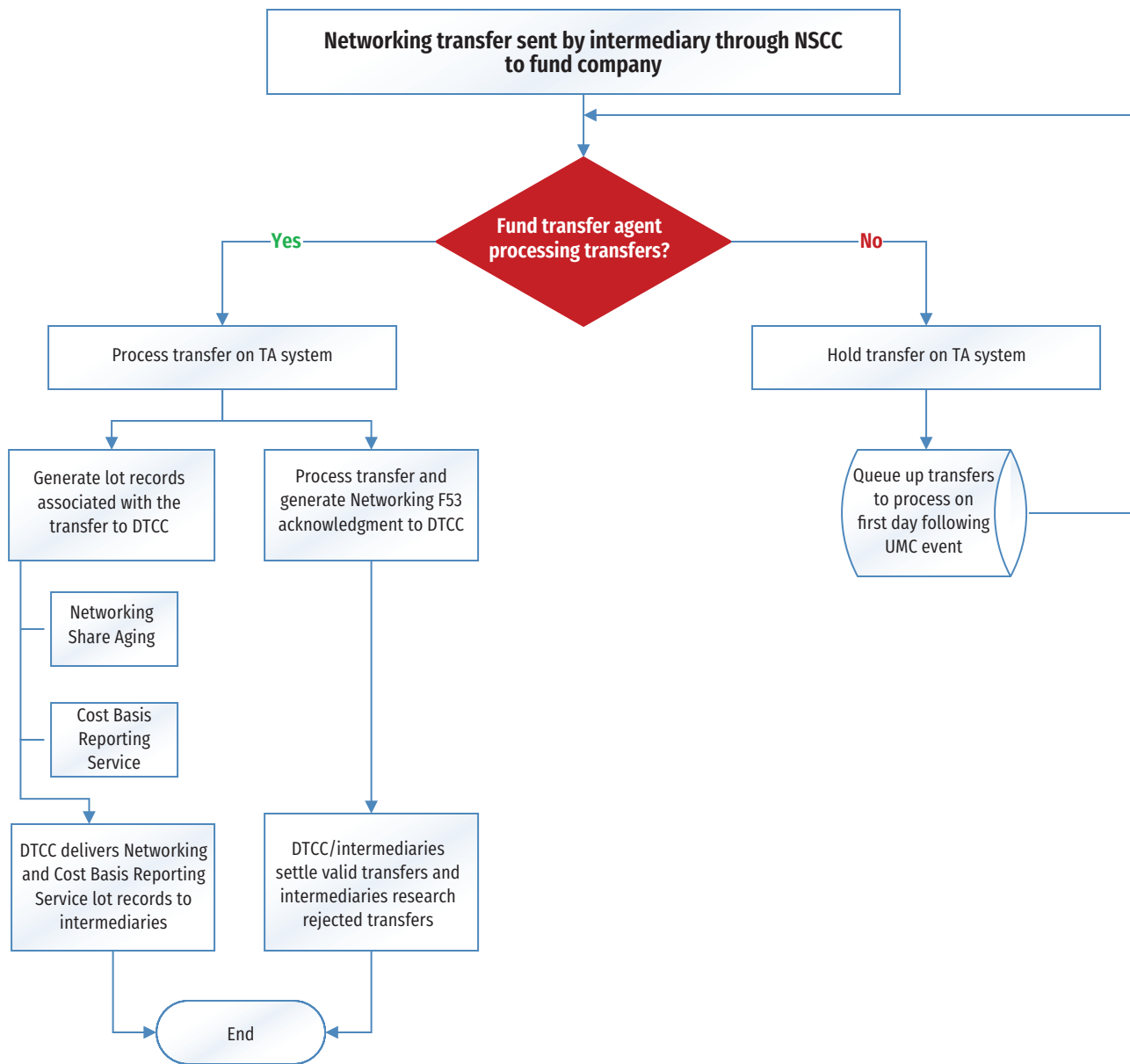
## Transaction Processing



## Manual Transfer Processing

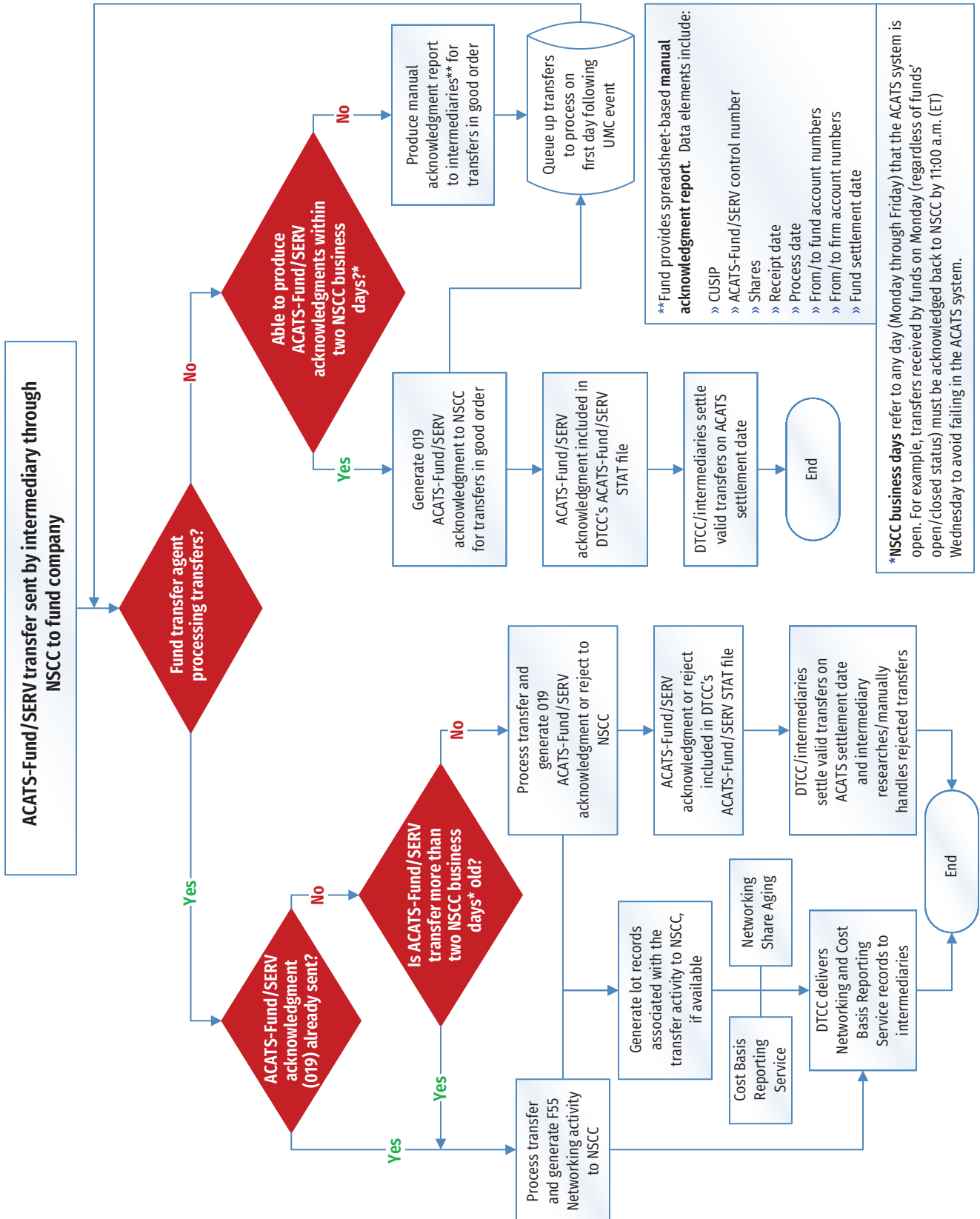


## Networking Transfer Processing





# ACATS-Fund/SERV Transfer Processing



\*\*Fund provides spreadsheet-based **manual acknowledgment report**. Data elements include:

- » CUSIP
- » ACATS-Fund/SERV control number
- » Shares
- » Receipt date
- » Process date
- » From/to fund account numbers
- » From/to firm account numbers
- » Fund settlement date

\*NSCC business days refer to any day (Monday through Friday) that the ACATS system is open. For example, transfers received by funds on Monday (regardless of funds' open/closed status) must be acknowledged back to NSCC by 11:00 a.m. (ET) Wednesday to avoid failing in the ACATS system.

## Appendix F: Sample Communications for Before the UMC

Members of the Operations Response Task Force (ORTF) provided sample communications used to notify intermediaries of their state of operations during December 5, 2018, the presidential day of mourning for George H. W. Bush.<sup>55</sup> This appendix includes the text of the samples provided; the organization's name and specific identifying details have been removed to anonymize the information. Samples bearing the same numeric reference pertain to the same organization.

### Sample 1a: Mutual Fund Complex A: State of Operations

Please find the information below on how [Fund Complex] intends to support mutual fund operational processes for the national day of mourning for President George H. W. Bush on Wednesday, December 5, 2018. The New York Stock Exchange (NYSE) has announced it will be closed, but the Depository Trust and Clearing Corporation (DTCC) has announced that it will clear and settle trades from earlier market activity and conduct all other normal business activities.<sup>56</sup>

- » All [funds managed by fund complex], including the [name of money market fund], that use NSCC Participant Number ##### will be closed and will not accept purchase or redemption transactions with a trade date of December 5.
- » No [funds managed by fund complex] will calculate an NAV on December 5.
- » Any Fund/SERV trades submitted with December 5 as a trade date will be rejected for an invalid trade date.
- » Any Fund/SERV transactions received on December 5, 2018, with a trade date prior to December 5 will be processed as normal. This includes DCC&S trades received the morning of December 5 with prior trade dates.
- » Settlement will occur for all accepted Fund/SERV trades scheduled to settle on December 5, including accepted DCC&S trades received that morning. Additionally, settlement will occur for the limited number of third-party retirement plan recordkeepers who trade in the [fund complex] through methods other than Fund/SERV for prior trade dates.
- » Any DCC&S trades with a trade date of December 4 or earlier received by [fund complex] the morning of December 6 and populated with an anticipated settlement date of December 6 will not be eligible for same-day settlement but will instead settle on December 7 if confirmed.
- » A single daily accrual rate will be calculated and applied to all applicable daily dividend funds for December 5, 2018, and will be transmitted through DTCC services as normal. Additionally, firms that receive a daily price and rate email from [fund complex] will receive the accrual rates via email.

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<sup>55</sup> Inclusion of these documents does not imply an endorsement of any specific policies or procedures regarding presidential day of mourning or other UMC activities. Organizations may have unique requirements for intermediary partners that are not otherwise included in these samples and should be added at the fund's discretion.

<sup>56</sup> In the case of an unanticipated UMC, advance communication most likely will not be possible. The elements highlighted in this appendix, however, will assist with prompt and effective communications during unanticipated UMC events.

- » All non-Fund/SERV transactions, including those submitted through Networking and ACATS, will be accepted and processed as normal on December 5, 2018.
- » [Fund complex] call centers will be closed on December 5, 2018.

Should you have any questions regarding this event, please feel free to contact our [customer service group] at ###-###-####.

Sincerely,

Relationship Management Team

### Sample 1b: Mutual Fund Complex A: Daily Accrual Rates

*The following email message included a spreadsheet with daily accrual rates. The layout for the daily accrual rate spreadsheet is provided after the email text for reference purposes.*

Good afternoon,

You have been identified as a recipient of the [fund complex] net asset value (NAV) prices.

Due to the presidential day of mourning, both the New York Stock Exchange (NYSE) and the NASDAQ stock market will be closed today, Wednesday, December 5, 2018. As a result of the market closure, [fund complex] will not be providing NAV prices, but will be providing daily accrual rates.

The attached spreadsheet contains the daily accrual rates for today, Wednesday, December 5, 2018. For those who use the NSCC Mutual Fund Profile Service Price and Rate File, the rates will also be provided via that method.

If you have any questions, please contact [fund complex] at ###-###-####.

Sample layout for daily accrual rate spreadsheet

CUSIP	Current date	Price	Price change	Rate	Rate change
123456789	5-Dec-18	0.00	0.00	0.00110770000	-0.00000105000

## Sample 2: Mutual Fund Complex B

[Fund complex] would like to provide some additional details relating to the upcoming unexpected market close (UMC) on Wednesday, December 5. [Fund complex] will follow industry best practices as published by ICI. Please review the following detail as it relates to activity anticipated for December 5:

- » All [fund complex] funds (NSCC participant number ####) will be closed for trading on Wednesday, December 5. Any trades submitted with a trade date 12/5 will reject.
- » Trade settlement will not be affected by the unexpected market close. Trades scheduled to settle on 12/5 will still settle on that date.
- » The DCC&S file sent the morning of 12/5 for trades from 12/4 will be processed as normal activity. These trades will settle on 12/5.
- » If you submit DCC&S trades on 12/6 as of trade date 12/4, the trades will be processed. However, the settlement for these trades will be switched to T+1 (non-DCC&S Settlement). These trades will settle on 12/7.
- » There will not be any anticipated delays with trade confirmations.
- » Any wires or checks received on 12/5 to purchase fund shares will be processed with a trade date of 12/6, the next business day.
- » The C to A rolls that are scheduled to process on 12/5 will be processed on the next business day, 12/6.
- » The capital gains distributions that were scheduled to have record date on 12/5 will be revised to the following: record date: 12/6, ex-div/reinvest: 12/7, payable: 12/10
- » Any daily accruing funds will receive a single-day accrual factor for each day (12/4 and 12/5). These rates will be distributed through Mutual Fund Profile I Price and Rate Service as they normally would.
- » Networking activity and ACATS transmitted on 12/5 will be accepted and processed.
- » The transfer agent for [fund complex] will be open for normal business hours.
- » [Fund complex] offices will be open.

Should you have any questions in relation to the UMC, please contact [email@fundcomplex.com](mailto:email@fundcomplex.com) for assistance.

## Sample 3: Mutual Fund Complex C

*This example presented information in tabular form and provides an example of differentiating between domestic and offshore fund operations.*

*The communication included two embedded spreadsheets; the layouts for each are provided after the main communication, for reference purposes:*

- » *open/closed (pricing) status of its funds*
- » *changes to dividend payment dates for certain funds*

In observance of the national day of mourning honoring former president George H. W. Bush, the New York Stock Exchange is closed on December 5, 2018. Your [customer service] representatives will be available to receive telephone calls and emails from #:00 AM to #:00 PM ET. In addition, [fund complex] is modifying operational practices as outlined below.

Category	Details
Prices	<ul style="list-style-type: none"> <li>» [Fund complex] <b>US-domiciled funds</b> using NSCC participant number/ID ##### will not be priced on December 5, 2018.</li> <li>» Offshore funds using NSCC participant number/ID ##### will be priced as indicated on December 5, 2018, in the CUSIP listing provided below.</li> <li>» CUSIP listing with pricing status on December 5, 2018: (see sample layout at the end of this communication example)</li> </ul>
Trades	<p>Trades submitted to a CUSIP under NSCC participant number ##### with a trade date of December 5, 2018, will be rejected and need to be resubmitted with an acceptable trade date when the market reopens on December 6, 2018.</p> <p>Trades submitted to a CUSIP not being priced on national day of mourning under NSCC participant number ##### with a trade date of December 5, 2018, will be rejected and need to be resubmitted with an acceptable trade date when the market reopens on December 6, 2018. Please refer to the CUSIP listing provided above for offshore fund pricing status.</p> <ul style="list-style-type: none"> <li>» Trades expected to settle on December 5, 2018, will process as scheduled.</li> <li>» As-of trades submitted via an 004 Record are expected to process as normal on December 5, 2018.</li> <li>» As-of trades submitted via an 001 Record or 015 Exchange Record will be rejected.</li> </ul>
ACATS	ACATS received on December 5, 2018, will have a process date of the following business day, December 6, 2018, and a settlement date of the previous business day, December 4, 2018. The ACATS acknowledgment will be transmitted on the national day of mourning, December 5, 2018.
Wires	NSCC money movement will occur as normal; however, [fund complex] will initiate wires on the market reopen date of December 6, 2018.
ACH redemption payments	ACH redemption payments scheduled to settle on December 5, 2018, will settle on December 6, 2018.
Networking files	<ul style="list-style-type: none"> <li>» B50 (New Account), B51 (Maintenance), and B52 (Transfer) records received on December 5, 2018, will be acknowledged on December 5, 2018.</li> <li>» B52s received on December 5, 2018, will be processed with an effective date of December 4, 2018.</li> <li>» Share Aging (F75) and Activity File (F55) will be sent December 6, 2018.</li> </ul>
Daily accrual fund rates	<p>Daily accrual fund rates for December 5, 2018, will be provided as follows:</p> <ul style="list-style-type: none"> <li>» The two-day rate (i.e., “fat” rate) for December 5, 2018, and December 6, 2018, will be provided in the NSCC Price Rate File transmitted on December 6, 2018.</li> <li>» The daily rate for December 5, 2018, will be provided in a subsequent notification on December 5, 2018.</li> </ul>
Dividend pay dates	The pay date for the attached listing of CUSIPs has been changed from December 5, 2018, to December 6, 2018. (see sample layout at the end of this communication example)

Please contact [customer service] at ###-###-#### to discuss any questions or concerns you may have.

### Sample layout for CUSIP listing with pricing status spreadsheet

Currency	Fund portfolio name	CUSIP	NASDAQ symbol for NSCC ID 1234 or ISIN for NSCC ID 9876	Pricing status	NSCC ID
USD	FUND NAME	123456789	ABCDE	Not priced 12/5/2018	####

### Sample layout for changes to dividend payment dates spreadsheet

Funds	Share class	Symbol	CUSIP	Scheduled pay date	New pay date	Record date	Ex-div date
FUND NAME	X	ABCDE	123456789	12/5/2018	12/6/2018	11/30/2018	12/3/2018

### Sample 4: Mutual Fund Complex D

The New York Stock Exchange will be closed on Wednesday, December 5, 2018, due to the death of the 41st president of the United States of America, George H. W. Bush. Please find the information below on how [fund complex] intends to support mutual fund operational processes for the national day of mourning:

- » All [fund complex] funds that use NSCC Participant Number #### will be closed and will not accept purchase or redemption transactions with a trade date of December 5.
- » Any Fund/SERV trades submitted with December 5 as a trade date will be rejected for an invalid trade date.
- » Any Fund/SERV transactions received on December 5, 2018, with a trade date prior to December 5 will be processed as normal. This includes DCC&S trades received the morning of December 5 with prior trade dates.
- » Settlement will occur for all accepted Fund/SERV trades scheduled to settle on December 5, including accepted DCC&S trades received that morning.
- » A two-day bulk accrual rate will be calculated and applied to all applicable daily dividend funds for December 4, 2018, and will be transmitted through DTCC services as normal. Additionally, [fund complex] will email out the individual daily accrual rates for Tuesday, December 4, and Wednesday, December 5.
- » All non-Fund/SERV transactions, including those submitted through Networking and ACATS, will be accepted and processed as normal on December 5, 2018.
- » No domestic [fund complex] fund will calculate an NAV on December 5.
- » [Fund complex] call centers will be open on December 5, 2018 (#:00 a.m. to #:00 p.m. ET).

Should you have any questions regarding this notification, please feel free to contact a representative of the [fund complex] at 1-###-###-####.

## Sample 5: Third-Party Mutual Fund Transfer Agent A

The following email message included a spreadsheet of closed CUSIPs. The layout for the closed CUSIP spreadsheet is provided after the email text for reference purposes.

The New York Stock Exchange, and other major exchanges, will be closed on Wednesday, December 5, in observance of the national day of mourning and for the passing of President George H. W. Bush. Accordingly, all daily-valued funds serviced by [third-party transfer agent] will be considered “closed” in accordance with their respective prospectuses. A CUSIP list is attached for reference.

There will be changes to our typical processing, as outlined below, in observance of this national holiday.

- » On Tuesday, December 4, all incoming and outgoing files will be processed as normal. Net asset values will be calculated. A two-day accrual factor will be provided for any daily dividend funds.
- » Wednesday, December 5, will be treated as a holiday from a shareholder processing perspective. However, for shareholder activity, since the DTCC is still open on Wednesday for settlement but not trading, we will settle NSCC activity from December 4 on December 5.
- » For daily net asset value funds, any shareholder wires or transactions received on December 5 will be processed using a trade date of December 6. NSCC trades submitted for trade date December 5 will be rejected. Any as-of trades submitted on December 5 will be rejected and should be resubmitted on December 6.
- » Net asset values will not be calculated on December 5. No files will be created or sent with a December 5 trade date.
- » On Thursday, December 6 all regular work resumes. Any wires, files or transactions received on December 5 will be processed with a trade date of December 6. Net asset values will be calculated on December 6.
- » [Third-party transfer agent]’s call center will be open on December 5.

If you have any questions, please contact [third-party transfer agent] dealer services at ###-###-####.

### Sample layout for closed CUSIP spreadsheet

Nbr comp	Nbr fund	Nme	Id CUSIP
123	123	FUND NAME	123456789

## Sample 6a: Third-Party Mutual Fund Transfer Agent B: NSCC Guide for UMC Activity

The following document included an embedded spreadsheet listing the asset managers supported by the third-party transfer agent. The layout for the spreadsheet of asset managers is provided after the document text for reference purposes.

[Third-party transfer agent] has unscheduled market close (UMC) functionality that allows us to process nightly cycles for our asset manager clients when the market is closed unexpectedly, but the DTCC is open for business. We process current day activity for open funds, all as-of activity, and post-settlement activity; process ACATS and networking files; and produce any outbound transmissions.

- » Fund/SERV
  - » All trades received in good order during a UMC with a valid as-of trade date are received, confirmed, and settled in accordance with the instructions received.
  - » Fund/SERV purchases, redemptions, and exchanges received in good order during a UMC for the current day for an open fund are received, confirmed, and settled in accordance with the instructions received.
  - » Fund/SERV purchases, redemptions, and exchanges received during a UMC for a current day for a closed fund are rejected back to the submitting firm.
  - » Post UMC event dates, any trades submitted as-of the UMC event date reject. (for funds that were closed during the UMC)
  - » Fund/SERV ACATS received during a UMC process to the TA recordkeeping system on the date received. Acknowledgments are sent to the DTCC on the next business day and will process using the last available price.
  - » All NSCC settlements will settle with the DTCC during a UMC and will settle to the TA recordkeeping system.
- » Networking
  - » No distribution events will execute on a UMC event date.
  - » We will send dividend activity records for any dividend adjustments that are processed during a UMC.
  - » For any direct at fund processing during a UMC, Networking F55 activity records are sent.
  - » We will process manual transfers on closed funds during a UMC.
  - » A list by CUSIP of the date and number of days that dividend accrual factors to be provided are expected to cover.

The layouts for both spreadsheets are provided after the email text for reference purposes.



## Sample 6b: Third-Party Mutual Fund Transfer Agent B: Open/Closed and Accruals

Dear distribution partner,

As we communicated yesterday, we have been working with our clients to gather information at the CUSIP level, for any funds that may be open on Wednesday December 5. All [third-party transfer agent] NSCC clients (see attached) have declared that they will be closed for trading on Wednesday December 5, 2018.

In addition, we have included a spreadsheet listing our clients' daily accrual funds and their rate methodology for this UMC event. The "daily factor" value corresponds to the number of days of accrual represented by the factor. Information in the spreadsheet may differ from what is reflected on Mutual Fund Profile I records received for some funds; the spreadsheet information reflects the correct rate methodology for this UMC event.

If you have any questions, please do not hesitate to contact us.

### Sample layout of dividend accrual methodology for the UMC event

Asset manager	DTCC number	TA fund number	Fund name	CUSIP number	Ticker symbol	Tuesday daily factor	Wednesday daily factor
FUND COMPLEX	1234	001	FUND NAME	123456789	ABCDE	1	1

### Sample layout of asset manager spreadsheet

Asset manager name	DTCC participant
COMPANY NAME	####

## Appendix G: Change Summary

Version and date published	Summary of changes
2.0: Winter 2019	<ul style="list-style-type: none"><li>» Reiterated focus of document to market disruption events only</li><li>» Incorporated details regarding “temporary” or “intraday” <i>market</i> disruptions (e.g., a “market halt” in trading)</li><li>» Updated recommended practice for funds to communicate operating status for both open and closed funds</li><li>» Revised dividend accrual discussion to align with current industry practice; recommend providing single-day factors for all open <i>and closed</i> accrual funds each day during a UMC event</li><li>» Adjusted output descriptions and corresponding appendix flowchart</li><li>» Updated exception process for acknowledging ACATS Fund/SERV transactions and effects of delaying transfer processing</li><li>» Described effect of daily NSCC settlement during a UMC on the processing of prior-effective date NSCC transactions, including DCC&amp;S activity</li><li>» Recommended review of NSCC as-of order rule for possible modification to accommodate for temporary impact on prior-effective date trades during a multiday and always on the first day following a full-day UMC event</li><li>» Clarified recommended practice regarding multiday DCC&amp;S processing/settlement during a UMC with daily NSCC settlement</li><li>» Expanded on automatic investment and systematic withdrawal plan processing during a UMC</li><li>» Referenced scheduled ad hoc events that may occur during a UMC, reminding funds to include them in UMC-related communications-Identified potential post-event considerations</li><li>» Renamed the “Distribution Accrual Impact Matrix” to “Multiday Accrual Rate Impact Matrix”</li><li>» Added considerations for determining accurate accrual entitlement for UMC events with daily NSCC settlement</li><li>» Incorporated appendix of sample redacted pre-UMC communication documents (specific to a presidential day of mourning)</li></ul>
1.0: Fall 2014	Initial publication





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