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Introduction

The following document consists of the response made by The Depository Trust Company (“DTC”) to the questionnaire entitled Disclosure Framework For Securities Settlement Systems (the “Disclosure Framework”). The Disclosure Framework was developed under the auspices of the Committee on Payment and Settlement Systems and the International Organization of Securities Commissions.

Consistent with the purpose of the Disclosure Framework, DTC’s response provides only a general overview of how DTC deals with certain risk management issues. Therefore, this document should not be relied upon by DTC Participants or others as a complete discussion of these matters.

Requests for further information may be directed to:

Ms. Diane Brennan  
Director-Risk Management  
Phone: (212) 855-3320  
Fax: (212) 855-3274
I. BASIC INFORMATION

A. What is the name of the SSS?

   The Depository Trust Company ("DTC").

B. Where and in which time zone is the SSS located?

   DTC’s principal offices are located in New York, New York (Eastern Time), with operating facilities in multiple locations.

C. What functions does the SSS perform?

   1. Does the SSS serve as a securities depository and/or provide securities settlement services?

      Yes. DTC serves as a custodian of the securities deposited by its Participants and provides securities settlement services.

      (a) What types of instrument are eligible for deposit at the SSS (e.g., debt, equities, warrants, etc.)

      The following types of instruments are eligible for deposit at DTC:

      **DEBT** (in addition to Government and Municipal Debt)
      Asset Backed Securities
      Auction Rate Notes
      Bank Notes
      Certificates of Deposit (Retail & Institutional CDs)
      Collateral Mortgage Obligations (CMOs)
      Commercial Paper (CP)
      Consumer Price Index-Linked Bonds (CPI Bonds)
      Convertible Debt
      Corporate Bonds
      Deposit Notes
      Discount Notes
      Insured Custodial Receipts
      Medium Term Notes (MTNs)
      Notes/Tender Rate Notes
Variable Rate Demand Obligations (VRDOs)
Zero Coupon Bonds

**EQUITY**
American Depositary Receipts (ADRs)
Auction Rate Preferred Securities
Closed End Funds
Common Stock
Limited Partnerships
Preferred Stock
Rights to Purchase Securities
Unit Investment Trusts (UITs)
Units
Warrants

**GOVERNMENT SECURITIES**
Brady Bonds
Non-U.S. Government Debt
U.S. Treasury, Federal Agency and Government Sponsored Enterprises Issues

**MUNICIPAL SECURITIES**
Auction Rate Notes
Insured Custodian Receipts
Municipal Bonds
Municipal Notes
Variable Rate Demand Obligations (VRDOs)

(b) **What types of instrument are eligible for transfer within the SSS?**

All the types of instruments listed above are eligible for transfer among Participants of DTC by book-entry delivery within DTC.

(c) **Please describe whether eligible securities are dematerialized, immobilized or transferred physically.**

Except for U.S. Treasury securities (and a small number of other issues) which are dematerialized, eligible securities are immobilized.
(d) Does the SSS provide safekeeping for physical certificates?

Yes.

2. Does the SSS provide cash accounts and/or provide funds transfers in conjunction with securities transfers? If so, in what currencies?

DTC provides each of its Participants with both a securities account and a U.S. dollar money settlement account in order to permit Participants to effect deliveries of securities against payment.

3. Does the SSS provide a trade matching service? Do others provide such services for securities settled at the SSS?

DTC does not provide a trade matching service. Currently, most institutional trades that are to be settled at DTC are submitted for matching to Omgeo, a service provider that is jointly owned by DTC’s parent, The Depository Trust & Clearing Corporation (“DTCC”), and Thomson Financial ESG.

For trades netted in the Continuous Net Settlement (“CNS”) system of National Securities Clearing Corporation (“NSCC”), which is also a wholly-owned subsidiary of DTCC, NSCC provides a trade matching service. The CNS system, which is currently available only for DTC-eligible securities, continually nets all trades due to settle the next day against each other and against prior days’ unsettled long and short positions in the same securities. As part of NSCC’s guarantee of settlement of marketplace transactions in CNS-eligible securities, NSCC becomes the contra-party to each CNS transaction. NSCC Participants obligated to deliver securities deliver them to NSCC as free book-entry movements at DTC (referred to herein as “short covers”). Likewise, NSCC Participants obligated to receive securities receive them from NSCC, also as free book-entry movements at DTC (referred to herein as “long allocations”).

4. Does the SSS provide a trade netting service (as distinct from undertaking the settlement of securities transfers on a net basis)? Do others provide such services for securities settled at the SSS? In either case, what types of netting (bilateral or multilateral), if any, are performed?
DTC itself does not provide a trade netting service as defined above. However, trades netted in NSCC’s CNS system are settled by transfers to and from accounts at DTC. NSCC’s CNS system provides for multilateral netting.

5. Does the SSS offer a securities lending or borrowing program?

DTC provides services that facilitate securities lending and borrowing transactions initiated by its Participants.

Securities lent by one Participant to another can be delivered by book-entry either free or against payment. DTC’s payment order service provides a vehicle for the transfer of cash between securities borrowers and lenders to account for adjustments in the market value of the borrowed securities during the period the loan is outstanding.

6. Does the SSS provide custodial and/or related services such as the collection of interest, dividends, principal or withholding tax reclamations? Which types of service are provided?

DTC collects and distributes to Participants dividend and interest payments for securities in its custody. When permitted by an issuer’s reinvestment plan, DTC’s Dividend Reinvestment service allows Participants, on behalf of interested customers, to reinvest dividends on shares without withdrawing them from DTC.

Participants can accept tender and exchange offers for securities in their accounts and deliver them to offerors’ agents through DTC. Similarly, DTC provides the means for Participants to exercise warrants, puts, conversions, rights to purchase additional shares, and other rights respecting securities in their DTC accounts.

When a security in the depository’s custody matures or is called by the issuer, DTC presents the security for redemption and distributes the proceeds to the appropriate Participants.

DTC’s Proxy service permits Participants to exercise voting rights on securities in the depository’s custody. In effect, DTC’s nominee, Cede & Co., the holder of record, assigns each Participant the voting rights on securities credited to that Participant’s securities account as of the record date.
With respect to withholding taxes applicable to dividends paid on foreign ordinary shares and American Depositary Receipts in DTC’s custody, through arrangements with the taxing authorities in certain countries DTC provides a service for beneficial owners entitled to a reduced rate to obtain reduced withholding at source, rather than by refund.

DTC provides services for the custody, clearance and settlement by physical delivery of securities for which book-entry services are not made available. These securities include certificates that the Participant desires to have registered in its name or in the name of its customer, as well as securities issues that cannot be made eligible for book-entry services for legal or regulatory reasons (e.g., securities with certain transfer restrictions).

7. **Does the SSS act as a central counterparty or principal to transactions with its participants?**

   No.

8. **Other? Please specify.**

   DTC offers a number of services that are related to its core custodial and securities settlement services. For example, DTC’s Underwriting service permits underwriters of new and secondary issues of securities to distribute them by book-entry against payment through the depository.

   Other services are described in DTC’s most recent annual report and in other DTC publications, which can be found on DTC’s website: www.dtc.org.

D. **What type of organization is the SSS?**

1. **Please indicate whether the SSS is a public sector or private sector entity.**

   DTC is a private sector company owned by members of the financial industry.

2. **Please indicate whether the SSS is organized on a for-profit or a non-profit basis.**
DTC is organized on a for-profit basis. However, under a policy adopted by DTC’s Board of Directors, no dividends are paid to stockholders and each year substantially all revenues in excess of DTC’s current and anticipated needs are refunded to Participants.

3. **What is the legal basis for the establishment of the SSS and for securities transfers made through it?**

DTC is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, and a member of the Federal Reserve System. DTC is also a “clearing corporation” within the meaning of Article 8 of the New York Uniform Commercial Code. DTC is registered as a clearing agency with the U.S. Securities and Exchange Commission (“SEC”) pursuant to the provisions of Sections 17A and 19(a) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

E. **Please describe and provide a diagram outlining the organizational and ownership structure of the SSS.**

Attached as Exhibit 1 are diagrams of the organizational and ownership structures of DTC.

1. **Who are the owners of the SSS?**

DTC is a wholly-owned subsidiary of DTCC. DTCC, in turn, is industry-owned. Participants of DTCC, NSCC and the other registered clearing agencies that are subsidiaries of DTCC (GSCC, MBSCC and EMCC) are allocated entitlements to purchase the common stock of DTCC based upon their usage of all five registered clearing agencies.

Certain participants, such as some smaller broker-dealers, have chosen not to purchase the shares to which they are entitled. These shares are held by their self-regulatory organizations in a representative capacity for their members.

2. **What entity or entities operate the SSS? Which functions of the SSS, if any, are outsourced to third parties?**
DTC carries on all of its own activities and has not outsourced its operations to third parties.

3. **Does the SSS have a Board of Directors?**

Yes.

(a) **What is its composition?**

The following is a list of DTC’s current Directors and their affiliations:

Bradley Abelow  
Managing Director  
Goldman, Sachs & Co.

Jonathan E. Beyman  
Chief Information Officer  
Lehman Brothers

Frank J. Bisignano  
Chief Administrative Officer and Senior Executive Vice President  
Citigroup/Salomon Smith Barney Corporate & Investment Bank

Michael C. Bodson  
Managing Director  
Morgan Stanley

Stephen P. Casper  
Managing Director and Chief Operating Officer  
Fischer Francis Trees & Watts, Inc.

Jill M. Considine  
Chairman, President and Chief Executive Officer  
The Depository Trust & Clearing Corporation

Dennis J. Dirks  
Chief Operating Officer  
The Depository Trust & Clearing Corporation
Mary M. Fenoglio
Executive Vice President
State Street Corporation

George Hrabovsky
President
Alliance Global Investor Services

Ronald J. Kessler
Vice Chairman
A.G. Edwards, Inc.

Catherine R. Kinney
President and Co-Chief Operating Officer
New York Stock Exchange

Peter B. Madoff
Senior Managing Director
Bernard L. Madoff Investment Securities

James H. Messenger
Chief Executive Officer
National Financial Services LLC

Eileen K. Murray
Managing Director
Credit Suisse First Boston

Thomas J. Perna
Senior Executive Vice President
The Bank of New York

Ronald Purpora
Chief Executive Officer
Garban LLC

Peter Quick
President
American Stock Exchange

Robert H. Silver
Executive Vice President and President of PaineWebber Services
UBS PaineWebber, Inc.
(b) What are its responsibilities?

Generally, the Board of Directors is responsible for supervising the business and affairs of DTC in order to promote DTC’s ability to serve its Participants.

F. Please describe the financial resources of the SSS.

1. Amount of paid-in capital and retained earnings?

As of December 31, 2001, DTC had $77.8 million paid-in capital and $24 million in retained earnings.

2. Guarantees, insurance coverage or other similar arrangements?

On occasion, DTC has required certain Participants to obtain a third-party guarantee of their obligations to DTC.

DTC currently maintains insurance coverage in the following amounts:

- $650 million on premises coverage under Blanket Bond/All-Risk policies.
- $650 million in-transit coverage under Blanket Bond/All-Risk policies for securities in transit while in the custody of messengers or a
transportation company; additional transit coverage is available for non-negotiable securities.

- $800 million in-transit coverage provided by the insurer of the armored car carrier service used by DTC. DTC’s coverage under the Blanket Bonds/All-Risk policies provides secondary coverage for securities lost while in the custody of an armored carrier.

- $1 million under Mail Policy covering registered securities lost after having been sent via first class mail.

- $25 million under Mail Policy covering registered securities lost after having been sent via registered or express mail or express courier.

3. **Credit lines or letters of credit?**

DTC currently maintains a $1.75 billion committed line of credit with a group of banks to provide liquidity in the event a Participant fails to pay its daily money settlement obligation to DTC. DTC also maintains a $50 million committed line of credit with a bank to provide funds so that DTC can distribute principal and income payments to its Participants when the payments are received too late to allocate on the payable date.

4. **Powers to assess participants or equity holders?**

DTC has the right under its Rules to apply its Participants Fund to any uninsured loss suffered by DTC and to require its Participants to make additional deposits to the Participants Fund in order to replenish it. Reference is made to the discussion of DTC’s Participants Fund in Section VI below.

G. **Please describe whether the SSS or its operator is subject to authorization, supervision or oversight by an external authority.**

DTC and its activities are regulated by the SEC, the Board of Governors of the Federal Reserve System (the “Fed”), and the New York State Banking Department.
II. RULES AND PROCEDURES OF THE SSS

A. Does the SSS maintain a complete list of the rules and procedures governing the rights and obligations of participants and the duties of the SSS?

Yes. The rights and responsibilities of DTC to its Participants and of DTC’s Participants to DTC are set forth in DTC’s Rules and Procedures.

1. How can participants obtain a copy of the rules and procedures?

DTC provides each Participant with a copy of DTC’s Rules and Procedures. Any changes are also provided to Participants.

2. Does other documentation provided to participants (e.g., user guides) have the same status as the rules and procedures?

Yes.

3. Describe the process for changing rules and procedures, including any need for regulatory approval.

(a) What authority is required, and how does this differ depending on the type of change involved?

Approval by DTC’s Board of Directors is required to amend DTC’s Rules. Changes in DTC’s Procedures are subject to approval by the Board of Directors or by the Chairman of the Board. None of the amendments to DTC’s Rules and Procedures can become effective until filed with, and approved or otherwise permitted by, the SEC (after review by the Fed) pursuant to the standards set forth in Section 19(b) of the Exchange Act.

(b) How are participants notified of changes in rules and procedures?

DTC notifies Participants of revisions to its Rules and Procedures by Important Notice.
(c) Is there a procedure for participants or others to comment on proposed rule changes?

Yes. Participants or others may submit to DTC for its consideration their comments with respect to any proposal to revise its Rules or Procedures. It should be noted, however, that most DTC proposals (e.g., proposed new services) are developed in close consultation with Participants. Written comments, if any, received by DTC must be submitted to the SEC as part of DTC’s filing. Under SEC procedures, the SEC also solicits comments on proposals filed by DTC.

B. Are the rules and procedures binding on the SSS as well as its participants? Under what conditions and on whose authority can written rules and procedures be waived or suspended by the SSS?

DTC’s Rules and Procedures are incorporated by reference into the Participant Agreement that is executed by the Participant and DTC, and are binding on both the Participant and DTC.

DTC’s Rules allow for the extension, waiver or suspension of any of DTC’s Rules by the Board of Directors, the Chairman of the Board, the President, or any Managing Director or Vice President, whenever such action is deemed necessary or expedient.
III. RELATIONSHIPS WITH PARTICIPANTS

A. Please describe the types of membership offered by the SSS.

1. How do the types differ?

   DTC has two categories of membership:
   
   . Full service membership – “Participants”
   
   . Membership for certain services only – “Limited Participants”.

   Pledgees in DTC’s system are not required to be Participants.

2. Within each membership category, are all participants subject to the same rules and procedures? Please describe important exceptions, including both differences in rules across participants and the rationale for these differences.

   Within each membership category each Participant is subject to the same Rules and Procedures.

   While each Participant is required to make at least the minimum deposit to DTC’s Participants Fund, a Limited Participant, depending upon whether the services it utilizes could result in a settlement obligation to DTC, may not be required to make a Participants Fund deposit.

B. Can participants establish accounts for their customers’ assets that are segregated from their own asset accounts at the SSS?

   Participants can request DTC to provide an additional account in DTC’s system in order to segregate their assets from those of their customers. Such additional accounts are subject solely to the instructions of the Participant.

1. If so, is this accomplished through a single omnibus customer account or through a multiplicity of accounts and/or sub-accounts?

   Participants have the option of segregating securities within their own account (omnibus) or of using additional accounts.

2. Is the segregation optional or compulsory?
The segregation of securities is not compulsory under DTC’s Rules and Procedures. DTC’s procedures are designed to facilitate its Participants’ segregation of securities so that they may comply with their legal or regulatory obligations.

3. **Does the fact that a sub-account at the SSS bears the name of a third party give any rights to that third party as a participant under the rules of the system?**

   No. A third party whose name may appear on an additional account has no rights under DTC’s Rules.

C. **Please describe participant requirements for each type of membership.**

1. **Are participants required to be domiciled or resident in a particular jurisdiction?**

   No.

2. **Are participants required to be subject to a supervisory regime? If so, please describe.**

   Yes. DTC’s Participant admissions policy permits entities to become Participants only if they are subject to regulation in their home jurisdiction.

3. **Are participants required to hold an equity stake in the SSS?**

   No.

4. **Are there financial, economic, personal or other requirements (e.g., minimum capital requirements, “fit and proper” tests)? If so, please describe.**

   Yes. DTC’s Rules set forth the basic standards for the admission of DTC Participants. DTC’s Rules provide that the admission of a Participant is subject to an applicant’s demonstration that it meets reasonable standards of financial responsibility, operational capability, and character. The Rules also
require all DTC Participants to demonstrate to DTC that these standards are met on an ongoing basis.

Each applicant is judged on its own merits. The extent and nature of the business which the applicant intends to conduct through DTC is carefully analyzed so that the likely range of settlement obligations that the applicant will have in DTC and the degree of risk to DTC can be evaluated. DTC analyzes the capital and financial stability of the applicant as well as the business and market risks to which the applicant is subject and decides whether the applicant has the financial capability to meet its likely DTC obligations. In no case, however, does DTC admit brokers-dealers with less than $500,000 in excess net capital or banks with less than $2 million in equity.

DTC also evaluates the operational capability of the applicant - whether it has the personnel, data processing capability, etc., to meet the technical demands of interfacing with the depository.

D. Does the SSS engage in oversight of its participants to ensure that their actions are in accordance with its rules and procedures? If so, please describe.

Yes. DTC monitors its Participants on an ongoing basis to assure that the Participants are in compliance with DTC’s Rules and Procedures.

DTC’s Compliance Department obtains information daily from other internal DTC departments regarding settlement, operational, or recordkeeping problems experienced with any DTC Participant.

The Compliance Department reviews the financial condition of all DTC Participants at least quarterly. Financial statements filed with regulatory agencies, information obtained from other self-regulatory organizations and information gathered from various financial publications are analyzed to assure that the Participant continues to be financially stable. The Department also monitors Participants’ settlement obligations, capital adequacy, and transaction activity on a daily basis to assure that the Participant continues to be capable of meeting its obligations to DTC.
E. Under what conditions can participants terminate their membership in the SSS? Does this mark the end of all liabilities of the participant? If not, please describe what liabilities could remain.

A Participant may terminate its membership in DTC by so notifying DTC in writing. Notwithstanding any such termination, a Participant remains obligated to satisfy any obligations and liabilities arising out of its membership in DTC.

F. Under what conditions can the SSS terminate a participant’s membership in the SSS?

DTC will terminate a Participant’s membership (i.e., cease to act for the Participant) upon determining that under DTC’s Rules the Participant is no longer qualified or is deemed to be insolvent.

In addition, DTC may terminate a Participant’s membership under any of the following circumstances:

- The Participant has failed to make required deposits to the Participants Fund within the required ten business day period after demand.

- The Participant has failed to make any other required deposit with DTC.

- The Participant has failed to pay any fine, fee or other charge provided under DTC’s Rules or Procedures.

- The Participant has failed to meet its settlement obligation to DTC.

- The Participant’s financial or operational condition has deteriorated to a point that its continuation as a Participant would jeopardize the interests of DTC and its other Participants.

- DTC’s Board of Directors, or a committee authorized thereby, has reasonable grounds to believe that the Participant or any person
associated with the Participant is responsible for (1) fraud, fraudulent acts or breach of fiduciary duty, (2) making a misstatement of a material fact or omitting to state a material fact to DTC in connection with its application to become a Participant or thereafter, (3) violating any Rule or any agreement with DTC or (4) the willful violation of the Securities Act, the Exchange Act, the Investment Company Act, the Investment Advisers Act, or any rule or regulation thereunder.

. The Participant or any person associated with the Participant is permanently or temporarily enjoined by order, judgment or decree of any court or other governmental authority of competent jurisdiction from acting as a broker, dealer, investment company, investment adviser, underwriter, bank, trust company, fiduciary, insurance company or other financial institution or from engaging in or continuing any conduct or practice in connection with any such activity, or in connection with the purchase, sale or delivery of any security.

. The Participant or any person associated with the Participant is expelled or suspended from a national securities association or exchange registered under the Exchange Act.

G. Please describe the scope of the SSS’s liability to participants, including the standard of liability (negligence, gross negligence, willful misconduct, strict liability or other), the force majeure standard, and any limitation to the scope of liability of the SSS (e.g., indirect or consequential damages). Where are these liabilities and their limitations set out (e.g., in statute or contract)?

As a general proposition, DTC’s responsibilities to Participants for the manner in which DTC’s services are provided are a matter of contract between DTC and its Participants, and are set forth in DTC’s Procedures.
IV. RELATIONSHIPS WITH OTHER SSSs AND COMMERCIAL INTERMEDIARIES

A. Does the SSS maintain linkages (including sub-custodian or cash correspondent relationships) or other relationships with other SSSs?

1. Please identify each of the other SSSs used and the type of securities transferred via the linkages.

(a) What is the name of the other SSS? Where is it located?

(b) What securities are eligible for transfer via the linkage to the other SSS?

(c) Are transfers of securities made via the linkage to the other SSS limited to only those that are free of payment or are transfers against payment also made via the linkage to the other SSS? If against payment, please describe the timing of the transfers and the corresponding payments.

(d) Does the other SSS provide custody services to the SSS and, if so, who bears any credit or custody risks?

DTC maintains an account at the Federal Reserve Bank of New York. Issues which are transferred over the Federal Reserve System’s securities transfer system (e.g., U.S. Treasury securities) and which are eligible at DTC may be transferred to and from that account free of payment.

Caja de Valores (Argentina), The Canadian Depository for Securities Canada (“CDS”), CAVALI (Peru), Clearstream Banking Frankfurt (Germany), CRESTCo (the United Kingdom), Hong Kong Securities Clearing Company Limited (Hong Kong), Monte Titoli (Italy), NECIGEF (The Netherlands) and the Tel Aviv Stock Exchange Clearinghouse (Israel) have each opened a Participant account at DTC. Transfers of DTC-eligible securities to and from the DTC accounts of those central securities depositories may be made free of payment and, in the case of CDS, against payment. The Canadian, German and Swiss (SIS Sega Intersettle) depositories provide custody services to DTC.

DTC has indirect linkages with Euroclear and Clearstream Luxemburg. In each of those linkages, a DTC Participant acts on behalf of the SSS. That Participant uses its DTC account to make and receive transfers of DTC-eligible securities between DTC Participants and the SSS. The transfers at DTC to and from the account of that Participant may be free or against payment.
Transfers against payment are effected in the normal manner for such transfers at DTC. Neither SSS provides custody services to DTC.

B. **Does the SSS use securities custodians (other than the other SSSs addressed in the previous question) and/or commercial cash correspondents? Please identify the custodians or cash correspondents used and the duties that each performs.**

In DTC’s Fast Automated Securities Transfer (FAST) Program, a number of transfer agents hold balance certificates registered in the name of DTC’s nominee as custodians for DTC. As securities are deposited in and withdrawn from the DTC system, the quantities of securities represented by the applicable balance certificates in the FAST program are adjusted accordingly.

In DTC’s Depository Facility Program, certain banks (as well as regional offices of NSCC) hold securities overnight as custodians for DTC after the securities have been deposited in the DTC system. The securities are shipped to DTC on the next business day.

C. **Please describe the standards used in approving or reviewing relationships with other SSSs, custodians or cash correspondents, including any financial or operational requirements or the presence of insurance or public supervision.**

DTC ‘s Risk Management Committee, which is described in Section VIII below, reviews linkages with other securities settlements systems, custodians and cash correspondents in order to assess any operational and financial risks arising from such linkages.

SEC regulations require that the form of agreement that DTC executes with a securities custodian contain certain specified provisions relating to, among other things, DTC’s ability to obtain its securities promptly. The form of agreement must be filed with the SEC for approval. DTC receives reports on the internal controls of its securities custodians from their independent accountants or internal auditors.

Most transfer agents in the FAST Program and all banks in the Depository Facility Program are required to carry insurance in a form and amount satisfactory to DTC.

Securities and cash positions at all of DTC’s custodians and cash correspondents are balanced and confirmed daily.
D. Does the SSS advance funds or securities to or on behalf of other intermediaries such as issuing or paying agents? If so, please identify the circumstances in which such exposure could arise.

No. DTC does not advance securities or funds to or on behalf of other intermediaries, such as issuing and paying agents.

E. Please describe measures in place to protect the SSS and its members against the failure of other SSSs or commercial intermediaries to meet obligations to the SSS, including risk controls, collateral or alternative sources of funds and securities.

As noted above, DTC does not advance securities or funds on behalf of other intermediaries. Participant accounts maintained by securities depositories are subject to all of DTC’s normal risk management controls, including collateral controls, as described in Section VIII below.
V. SECURITIES TRANSFERS, FUNDS TRANSFERS
AND LINKAGES BETWEEN TRANSFERS

A. Please discuss whether and how settlement instructions are matched between participants prior to processing by the SSS.

1. Is matching required for all transactions without exception?

2. What procedure is used when instructions do not match?

3. Are matched settlement instructions binding on participants?

   (a) If so, please describe the consequences of failure by participants to meet obligations (e.g., forced settlement, penalties, short positions).

   (b) Please describe whether this is a feature of the SSS’s rules and procedures or of national law or regulations.

   (c) Please provide a time line indicating the points at which matched instructions become binding, as well as any pre-matching process that takes place.

No. Matching is not required for all transactions at DTC. A transfer of securities at DTC can be effected on instructions to DTC only from the delivering Participant. As described in Section I above, transfers of securities at DTC on the instructions of NSCC are the result of matching in the NSCC system. Broker-dealers and their institutional customers can agree on the details of trades by using a matching service provider such as Omgeo, and agreed-on trades can then be settled at DTC.

B. Are securities transferred within the SSS registered?

1. Who is the registrar?

2. Is it normal practice to register the securities in the name of the SSS (or its nominee) or in the name of the beneficial owner? Are there instances in which securities housed within the SSS are registered to neither the SSS (or its nominee) nor the beneficial owner?

3. If the SSS offers custodial services, will it hold securities registered in the name of the beneficial owner?
4. Under what circumstances does the SSS initiate registration of securities in the buyer’s name?

5. How long does the registration process typically take? Are participants notified when registration is complete?

6. Can securities be transferred within the SSS before registration in the buyer’s name is complete? If so, do the rules and procedures of the SSS provide for an unwind or reversal of such transfers in case of bankruptcy or other events which result in the buyer’s name not being entered on the register?

With the exception of securities in DTC’s custody for which book-entry services are not available, securities certificates for registered issues deposited in the DTC system are sent by DTC to the issuer’s transfer agent for registration of transfer into the name of DTC’s nominee, Cede & Co. Bearer securities can also be deposited at DTC.

A Participant depositing a security is given immediate credit for the deposit in the Participant’s DTC account and can use that credit to effect book-entry transactions.

For most registered securities issues, a Participant with securities on deposit within the DTC system can withdraw the securities physically and have them reregistered in the name of the Participant, its customer or another party. On the instructions of the withdrawing Participant, DTC debits the securities from the Participant’s account and instructs the transfer agent to register the transfer of the securities into the name designated by the Participant. The reregistered securities are then sent to the Participant or its customer.

For transfer agents required to register with the SEC, the time period for the registration process referred to in the preceding paragraphs is subject to SEC rules. The registration process usually takes 2-3 days. The Participant, upon inquiry, is able to determine when registration is complete.

A large number of registered securities issues are issued in book-entry-only (“BEO”) form. For these issues, there are one or more global certificates registered in the name of Cede & Co. and the issuer does not make securities certificates available to Participants or their customers.
C. Please describe how securities transfers are processed within the SSS.

1. Please indicate whether the transfers are processed as debits and credits to members’ accounts or via some other method.

2. On a continuous (real-time) basis, or in one or more batches?

3. If continuous, during what hours does the processing occur? If in batches, at what time or times is the processing initiated and completed?

4. Do securities settlements occur daily? Please identify securities for which settlement occurs only on specific days of the week or month.

Transfers of securities within the DTC system are processed by debits and credits to Participants’ accounts. Some transfers are processed in batches, and other transfers are processed on a real-time basis. The source of the transfer instructions determines whether a batch method or real-time method is used. For example, transfer instructions received early in the processing day from NSCC or from a trade matching service provider such as Omgeo are processed at that time in batches. Transfer instructions received from Participants during the day are processed on a real-time basis. Securities settlements occur daily. Transfers of securities delivered against payment are effective simultaneously with payment.

Generally, deliveries of securities for value can be effected until 3:30 P.M. and free deliveries can be effected until 6:00 P.M.

D. Please describe whether final funds transfers in conjunction with the SSS are made as debits and credits to balances held at the SSS, at one or more commercial banks, at the central bank, or via some other method.

1. Does the SSS maintain cash accounts for its participants? Are these accounts equivalent to deposit accounts at a commercial or central bank or do they serve only as “cash memorandum” accounts?

2. On what entity (SSS or other) does the participant bear cash deposit risk?

3. Under what circumstances does the SSS provide credit extensions or advances of funds to its participants and thereby expose itself to credit risk?
4. How long can such credit extensions last? How long do they typically last?

DTC does not maintain cash accounts for its Participants. In addition to a securities account at DTC, each Participant has a settlement account. During the day, debits and credits are entered into the Participant’s settlement account. The debits and credits arise from securities transfers against payment made and received by the Participant and from other transactions such as principal and income payments received in respect of securities credited to the Participant’s securities account. At the end of each day, the debits and credits in the Participant’s settlement account are netted. Then, DTC and NSCC net the settlement balances of each DTC Participant that is also a member of NSCC. After netting with NSCC, DTC pays any net credit balance in the account to the Participant, and the Participant pays any net debit balance to DTC. Payments are made to and from DTC’s account at the Federal Reserve Bank of New York through the Federal Reserve System’s money transfer system (sometimes called the Fedwire system). Each Participant must engage a Settling Bank, which is a DTC Participant bank with access to the Fedwire system, to act on the Participant’s behalf in settling with DTC. A Participant which qualifies as a Settling Bank may act as its own Settling Bank. A Settling Bank is not required to pay DTC a debit balance on behalf of a Participant and is not required to advance funds to a Participant.

DTC neither advances funds nor provides intra-day credit extensions to its Participants.

E. Is the SSS a DVP system? If so, please describe the DVP model used according to the models outlined in the DVP Report (see the Introduction). Please also provide a diagram indicating the timing of events in the processing of securities and funds transfers in the SSS. Where the SSS provides more than one alternative for settlement processing, please provide a response for each alternative and indicate the relative importance of each alternative.

1. Are funds transfers and securities transfers processed within the same system or in different systems? If different, how are they linked?

   (a) Please describe whether each securities transfer is linked to a specific funds transfer on a trade-by-trade basis or on a net basis or via some other method.

   (b) Does the SSS “split” large transactions into multiple transactions or require participants to do so?
2. When do securities transfers and funds transfers become final?

(a) At what time do securities transfers become final? After what event or events?

(b) At what time do funds transfers become final? After what event or events? Does this timing allow for same-day retransfer of funds received in exchange for securities?

(c) If final delivery of securities precedes the final transfer of funds, can participants dispose freely of such securities prior to funds finality? If so, what actions will be taken if funds are not received?

(d) If final delivery of funds precedes the final transfer of securities, can participants dispose freely of such funds prior to securities finality? If so, what actions will be taken if securities are not received?

(e) Does the timing of finality differ depending on the type of security transferred or the currency in which payment is to be made? Please describe.

3. Please discuss whether participants are notified of securities or funds transfers while they are still provisional, only when they are final, or both.

The DTC system provides a DVP mechanism. The DTC system is similar to Model 2. DTC employs three principal risk management controls to protect DTC and its Participants against the risk that a Participant will fail to pay the net debit balance in its settlement account. Those risk management controls, which are discussed in Section VIII below, are the collateral control, the net debit cap control and the largest provisional net credit procedure applicable to money market instruments (“MMIs”).

Funds transfers and securities transfers are processed within the same system at DTC. As described in subsection D, above, when a delivery of securities against payment is made at DTC, the corresponding debit and credit are entered in the settlement accounts of the receiving and delivering Participants. At the end of the processing day, the debits and credits in each Participant’s settlement account are netted, and the net credit balance or net debit balance is settled between DTC and the Participant. Large transactions are not split into multiple transactions. However, there is a size limitation of $50 million on deliveries against payment of MMIs.
Securities transfers at DTC are final when made, from the standpoint of the delivering Participant. Under certain circumstances, however, the receiving Participant can return (reclaim) the securities on the day of the transfer or the next day.

Funds transfers over the Fedwire between DTC and a Settling Bank acting on behalf of a Participant are final when made.

A receiving Participant is permitted to dispose of securities prior to money settlement with DTC subject to the application of DTC’s risk management controls, which are described in Section VIII below.

The timing of finality of securities transfers and funds transfers does not depend on the type of security transferred. At present, all payments in DTC’s daily money settlement are made in U.S. dollars.

Participants are notified of securities or funds transfers by DTC when processed.

Attached as Exhibit 2 is a schedule of the times of significant processing events.

F. Does the SSS itself “guarantee” funds or securities transfers?

1. Under what circumstances and at what point are transfers guaranteed by the SSS?

2. What actions does the guarantee obligate the SSS to take?

3. Please indicate whether the guarantee is a feature of the SSS’s rules and procedures or of national law or regulations.

No. DTC does not itself guarantee any funds or securities transfers which its Participants are obligated to make.
VI. DEFAULT PROCEDURES

A. Please discuss the events or circumstances that would constitute default of a participant under the rules and procedures of the SSS or that would lead the SSS to make use of exceptional settlement arrangements or unwind procedures.

1. Failure by a participant to meet a test of its solvency under the applicable laws of its jurisdiction?

2. Failure to make payments or deliveries of securities within the time specified?

3. To the extent that the rules and procedures grant discretion in the determination of the use of default or other exceptional procedures, please discuss where the authority to exercise such discretion resides and the circumstances in which this authority would be used.

The conditions under which DTC will cease to act for a Participant are set forth in Section III above. DTC will employ the default procedures described below only if DTC has determined that the Participant is insolvent as defined in DTC’s Rules (e.g., entry of a court order adjudging the Participant a bankrupt or insolvent) or the Participant fails to settle with DTC.

B. What procedures are followed by the SSS once it has determined that a default event has occurred or that exceptional settlement arrangements are to be employed?

1. How and at what point are participants notified that this has occurred?

   Notification of DTC’s decision to cease to act for a Participant will be provided immediately to the SEC and to other clearing agencies in which the Participant is also a member. DTC will broadcast such notification to its Participants over DTC’s Participant Terminal System (PTS), publish an Important Notice to its Participants and submit a filing to the SEC.

2. Would the SSS be expected to continue to meet all its obligations to participants under these circumstances? Please discuss the resources in place to ensure that this would occur (e.g., collateral, participants fund, insurance, loss-sharing arrangements, etc.).
3. Please describe and provide a time line indicating the order in which these resources would be used as well as the timing of participant notifications and important deadlines (e.g., when the SSS’s obligations to participants would be met, when participants would need to cover their loss-sharing obligations).

In the event that it ceases to act for a Participant, DTC will be expected to continue to meet all its obligations, including the completion of settlement. DTC has available liquidity resources of $2.35 billion, consisting of an all cash Participants Fund (the “Fund”) of $600 million and a committed bank line of credit of $1.75 billion, in order to complete settlement.

Each Participant is required to make a deposit to the Fund based upon a sixty business-day rolling average of the Participant’s intra-day net debit peaks. In the event that DTC becomes concerned with a Participant’s operational or financial soundness, DTC may require an additional deposit to the Fund. The minimum deposit is $10,000. A Participant may make a voluntary deposit to the Fund in excess of the amount required.

In addition to being a liquidity resource, the Fund is available to satisfy any uninsured loss incurred by DTC, including a loss resulting from a Participant’s failure to settle. In the event of such loss, DTC would first charge the loss to that Participant’s deposit to the Fund (including its voluntary deposit, if any). If the loss exceeded the failing Participant’s deposit, DTC could charge the excess to its retained earnings or pro rata to the required Fund deposits of all other Participants. Should DTC make a charge against a Participant’s required deposit to the Fund (pro rata or otherwise), the Participant must make an additional deposit to the Fund in an amount equal to the charge.

If the Fund is applied to a loss, DTC is required to notify the SEC and each Participant promptly thereafter. Each Participant’s obligation to make an additional deposit to the Fund will be reflected as a debit in its money settlement account on the business day following such notification.

4. Please describe all conditions under which provisional transfers of securities or funds could be unwound by the SSS.
(a) How and on what authority would a decision to unwind securities or funds transfers be made by the SSS?

(b) When and how would participants be notified of a decision to unwind provisional securities or funds transfers?

(c) How long would participants have to cover any debit positions in their own securities or funds accounts resulting from an unwind?

(d) In the event of an unwind, would all transfers be unwound or would only a subset of transfers (e.g., only securities purchases or only those of a subset of participants) be unwound?

(e) If only a subset of transfers, what procedure would be followed to determine which transfers and in what order?

In the event of a Participant’s failure to settle, DTC will first use the Fund (including any voluntary deposits) as a liquidity resource to complete settlement. If the Fund is not sufficient, DTC will borrow from its line of credit banks, pledging collateral securities in the failing Participant’s account. These funds will ordinarily be restored on the day following the failure to settle, when the failing Participant pays DTC. The failing Participant has until 10:00 A.M. on that day to wire the necessary settlement funds, including interest, to DTC’s account.

If the Participant fails to wire the necessary settlement funds, DTC is authorized to sell the collateral securities in the failing Participant’s account.

5. Can bankruptcy or insolvency be declared retrospectively in the SSS’s jurisdiction (e.g., under a “zero-hour” rule), and could this cause provisional securities or funds transfers to be unwound?

No.

6. Please describe any circumstances in which transfers of securities or funds that were defined as final in response to question V.E.2 above would ever be unwound.

Transfers of securities or funds so defined are final.
C. Has a participant in the SSS ever been declared in default or become insolvent?

1. Have loss-sharing procedures been invoked?

2. Please describe whether any of these defaults or insolvencies resulted in losses for the SSS or its participants and how they were absorbed.

Since the creation of the depository in 1973, DTC has never suffered a loss resulting from a Participant default or insolvency and has never made a charge against the Participants Fund.

VII. SECURITIES OVERDRAFTS, SECURITIES LENDING AND BACK-TO-BACK-TRANSACTIONS

A. Is it possible for debit positions (overdrafts) in securities accounts at the SSS to arise?

Yes. Debit positions (i.e., short positions) can occur.

1. Under what conditions could such debit positions occur?

Normally, since deliveries are not processed by DTC unless the delivering Participant has a sufficient quantity of securities credited to its account prior to the delivery, a Participant cannot overdraw its account at DTC. However, two processes initiated externally can cause short positions to arise.

- Deposit Rejects: Most short positions are the result of deposit rejects. As described in Section V above, a Participant depositing a registered security at DTC is given immediate credit for the deposit in the Participant’s DTC account, and the deposited certificate is sent by DTC to the issuer’s transfer agent for registration of transfer into the name of DTC’s nominee. If the transfer agent refuses to register the security in the name of DTC’s nominee, the deposited certificate rejected by the transfer agent is returned to the Participant and the quantity of the deposited security is deducted from the Participant’s DTC account. If that deduction results in a negative position in the Participant’s account (a “short position”), the Participant is required to provide a cash security deposit to DTC (the “short position penalty”) equal to 130% of the market value of the deposited security (marked to the market each day) until the matter is resolved.
Partial Call Lotteries: Under DTC’s Procedures relating to a call (i.e., redemption) of part of an issue, DTC allocates the called securities by means of an impartial lottery, based upon Participants’ net long positions as of the close of business on the day prior to the publication of the call notice. For the vast majority of partial calls of callable securities on deposit with DTC, the depository does not receive notice of the call in advance of the publication date and, therefore, must run its lottery after publication date. To the extent that, because of deliveries effected by a Participant between the publication date and the date DTC is able to allocate called securities to its account, the Participant’s remaining long position is less than the amount allocated, the Participant will be left with a short position.

(a) Do these conditions always result in debit positions in securities accounts rather than failed transactions? If not, please explain the basis for differential treatment by the SSS.

The processes described above result in short positions only, and do not create failed transactions.

(b) Are these situations covered explicitly by the rules and procedures of the SSS?

Yes.

2. How long can such debit positions last? How long do they typically last?

While theoretically there is no limit to the time short positions can be outstanding, short positions in debt securities (which represent the vast majority of short positions at DTC) can be outstanding at most until the securities are redeemed or mature. Currently, the average age of a short position at DTC is between seven and eight days.

3. How are debit positions in securities accounts prevented, rectified or managed?

DTC discourages short positions by charging the short position penalty until the position is covered. DTC also has a number of procedures to help reduce and eliminate short positions, particularly those that are outstanding for
long periods because, for example, the issues are difficult to purchase on the open market. The following briefly describes a few of these procedures:

- A Participant having a short position in a particular security as the result of a rejected deposit is permitted for a limited period of time to reverse book-entry deliveries of that security effected by the Participant between the date of the deposit and the date of the reject. If a book-entry delivery is reversed under this procedure, the settlement obligations of the parties are reopened (i.e., the Participant that reverses the book-entry delivery will still have an obligation to deliver to the receiving Participant securities in settlement of the original transaction).

- A Participant having a short position in a particular security as the result of the partial call allocation process is permitted for a limited period of time to reverse book-entry deliveries of that security effected by the Participant between the publication date and the allocation date. If a book-entry delivery is reversed under this procedure, the settlement obligations of the parties are re-opened.

- DTC permits a Participant having a short position in a particular security to use DTC’s facilities to communicate with other Participants having long positions in that security in order to arrange to purchase a sufficient quantity to cover the short position.

- With respect to a Participant short position that has been outstanding for 90 days or more, DTC itself is authorized to purchase a sufficient quantity of the security to cover the short position, using the Participant’s short position penalty to fund the purchase price.

4. What procedures would be followed by the SSS in case the debit cannot be rectified (e.g., failure by a participant with a debit balance in a securities account or unavailability of the securities in the market).

   (a) Application of loss-sharing provisions allocating the loss to participants?

   (b) Absorption of the loss by the SSS?

   (c) Other? Please specify.
The short position penalty would be available to cover the obligation of a failing Participant. In the extremely unlikely event that the short position penalty and the failing Participant’s deposit to the Participants Fund are not sufficient to cover any loss suffered by DTC, DTC’s retained earnings as well as the Participants Fund (involving loss sharing by Participants on a pro rata basis) would be available for such loss.

B. Under what circumstances does the SSS provide for the lending of securities to ensure settlements?

1. Is the process for lending securities automatic? If not, please describe the procedures used by the SSS to determine whether a securities loan will be made.

2. At what point are participants notified that securities are being lent to them in order to complete their settlements?

3. Which securities on deposit at the SSS are eligible for lending? Do participants have the option to make securities available for lending or is it mandatory?

4. Are lent securities identified by the SSS with specific participants as lenders or only with a common pool of securities available for lending? Does the participant whose securities are lent become a principal to the transaction?

DTC itself does not provide for the lending of securities to ensure settlements. However, as described in Section I above, DTC provides services that facilitate securities lending by its Participants and their customers.

C. How does the SSS settle back-to-back transactions?

1. Under what conditions are delivery instructions by participants receiving and redelivering securities on the same day under back-to-back transactions settled for same-day value?

   (a) Only if the participant has securities on deposit with the SSS that have been received pursuant to a final securities transfer?

   (b) If the participant has securities on deposit with the SSS that have been received pursuant to a provisional securities transfer?
(c) Before securities have been received either provisionally or finally, but when a matched receipt instruction exists for the same or greater value? Is such a practice limited to markets where matching is binding?

(d) Before securities have been received either provisionally or finally, but when a third party has promised to deliver to the SSS securities of the same or greater value? Must the provider of the guarantee have itself received the securities through a final transfer? Please describe how the SSS evaluates such promises, and whether they are addressed by the written rules and procedures of the SSS.

(e) Other? Please specify.

2. Please describe limits or controls in place with respect to any of the above arrangements for the settlement of back-to-back transactions, including limits on amounts involved or related to the liquidity of the underlying securities.

3. Under what conditions are payment instructions by participants in the SSS under back-to-back transactions settled for same-day value? Can participants use the proceeds of an on-delivery of securities without the need for an extension of credit?

DTC does not settle “back-to-back” transactions as defined herein. However, a Participant receiving a delivery of securities intra-day is able to redeliver those securities for same-day value in advance of final settlement so long as DTC’s collateral, net debit cap and Largest Provisional Net Credit (“LPNC”) controls applicable to both the redelivering Participant and the counterparty to the redelivery are satisfied. These controls are described in Section VIII below.
VIII. RISK CONTROL MEASURES

A. Please describe the roles and responsibilities of those areas of the SSS responsible for risk management and control.

DTC has a Risk Management Committee (the “Committee”) to evaluate and coordinate the risk management activities within the organization. The Committee is composed of nine officers, representing the following areas: Finance, Auditing, Information Services, Operations, Risk, International, Systems Processing and Legal. DTC’s General Counsel acts as Chairman.

The Committee reports to the Audit Committee of DTC’s Board of Directors.

1. Please describe the process for the internal review of risk management policies and procedures.

DTC continually performs risk assessments of its operations, data processing systems, communications networks and facilities. Whenever a new or expanded service is proposed, the project is reviewed by members of senior management. Risk assessment is a crucial element of such reviews. In appropriate cases, a project may be subject to risk assessment reviews by the Committee, attorneys, internal auditors and DTC’s independent accountant.

2. Is there a risk management policy that addresses the review and approval of new products and services offered by the SSS? At what level of the organization is risk management approval given for a new product or service?

As a matter of DTC practice, before being offered, a new product or service must receive risk management approval by DTC’s Chief Operating Officer, President or Chairman.

3. Does the SSS have a risk management function with clear independence from and authority over operational marketing functions?

Yes. The Committee is independent from the operational and marketing functions.
4. Does the Board of Directors review risk management policies and procedures? Does the Board have a risk management or audit committee?

Yes. DTC’s Board of Directors has an Audit Committee whose responsibilities include the review of DTC’s risk management policies and procedures.

B. Please describe any internal or external audits or supervisory/regulatory examinations that are performed with respect to the SSS. For each such audit or examination, please address the following questions.

1. Who performs the audit or examination?

DTC’s Internal Audit Department and its independent accountant regularly review the adequacy of DTC’s internal controls, procedures and records. In addition, the Federal Reserve Bank of New York, the New York State Banking Department, and the Securities and Exchange Commission routinely examine the depository.

2. What is the scope of the audit or examination?

(a) Please indicate whether and how it addresses the sufficiency of and compliance with internal controls.

Evaluations of DTC’s financial statements and internal controls over securities and related monies processed and/or held for Participants and others are conducted on a periodic basis. Such examinations cover all critical processing areas of the operation, as well as the data processing environment.

(b) Please indicate whether and how it addresses the SSS’s compliance with its own rules and procedures.

All examinations are designed to test for compliance with DTC’s Rules and Procedures. Any instances of noncompliance are reported to senior DTC management and are corrected.

3. What is the frequency of the audit or examination?
DTC’s independent accountant, the Federal Reserve Bank of New York and the New York State Banking Department each conduct annual reviews. The Securities and Exchange Commission conducts an annual inspection of DTC’s data processing areas and has conducted an inspection of selected operating areas every other year.

DTC’s Internal Audit Department conducts, on a rotation schedule, an annual audit of all critical areas.

4. Are audit or examination reports available for review by participants?

DTC’s independent accountant issues a report on internal controls which is provided to all Participants and interested third parties.

C. Please discuss whether the SSS has the capacity to value (i.e., mark to market) the securities that it holds.

1. Please describe how these valuations are used by risk control systems at the SSS.

DTC monitors the value of the securities used as collateral to support a Participant’s net settlement debit. The collateralization control is meant to assure that DTC has available sufficient collateral to cover the Participant’s net settlement debit in the event that it fails to settle.

2. How frequently are securities revalued?

Daily.

3. What are the sources for security valuations?

(a) What outside price or data sources are used?

DTC attempts to obtain an end-of-day price in an automated format from a third-party vendor for each of its eligible securities. In the case of CMOs, which are complex, highly interest-rate-sensitive securities, DTC attempts to obtain pricing data from two outside sources. In addition, pricing data is supplied by lead underwriters for new issues not yet priced by a vendor.
(b) If pricing models are used, please describe how the models are chosen and how the model inputs are obtained.

The above vendor data is supplemented with DTC’s mainframe-based pricing models for Money Market Instruments.

D. Please discuss whether the SSS has a lien on the securities held in or transferred through it.

1. Does the lien apply only to the securities owned by the participants themselves or does it extend to the securities beneficially owned by customers of participants?

2. Under what circumstances and in what manner would such a lien allow the SSS to use the securities?

As indicated above, the goal of DTC’s collateralization control is to ensure that DTC has access to sufficient collateral of the Participant to cover any net debit in its money settlement account. Collateral includes: (1) the Participant’s deposit to the Participants Fund; (2) securities in the Participant’s account that the Participant has designated as collateral; and (3) securities that have been delivered intra-day to the Participant’s account against payment.

DTC is not aware of the beneficial ownership of securities credited to the accounts of its Participants, including securities that are treated as collateral. DTC’s Rules give DTC the right to pledge such collateral securities to DTC’s line of credit banks in the event of a Participant failure to settle.

In the event that a failing Participant is insolvent and unable to pay its settlement debit, DTC is authorized to sell the collateral securities in order to cover that debit.

E. Please discuss the circumstances in which the SSS requires collateral to limit or mitigate risks.

1. Does the SSS manage its own collateral system?

Yes. DTC manages its own collateral system.
2. Does the SSS share a collateral system with another SSS or payment system?

No. DTC does not share its collateral system with any other SSS.

DTC and NSCC have entered into a limited cross-guaranty agreement which provides, with respect to CNS long allocations, a DTC guarantee either to return the securities to NSCC or to compensate NSCC for these securities if the receiving DTC Participant (which is also a member of NSCC) redelivers the securities. DTC’s guarantee eliminates a potential NSCC risk. Not giving collateral value to long allocations, together with the collateral controls applicable in DTC’s system, mitigates DTC’s risk in providing this guarantee.

3. Can collateral at the SSS be posted and returned on the same day?

Yes. Collateral can be returned to the Participant intra-day as long as the returned collateral is excess (i.e., at the time of the return the Participant’s net debit with DTC is fully supported by other collateral acceptable to DTC).

4. What types of transaction at the SSS involve the use of collateral?

Transactions that are processed in DTC’s end-of-day net settlement system are subject to DTC’s collateral requirements.

5. What are the policies with regard to the type of collateral used or haircuts required?

All types of securities that are eligible for deposit may be used as collateral.

The collateral value attributed to securities is equal to the prior business day’s closing market price, less a haircut as determined by DTC. Because DTC may have to finance a Participant’s failure to settle, the haircut structure takes into consideration market fluctuations and the haircuts imposed on DTC by DTC’s line of credit banks. Securities that are not acceptable to the banks receive no collateral value in DTC’s system.

6. How are collateral valuation methodologies developed and reviewed?
A security’s haircut is determined by the application of criteria relating to security type, rating, market price and whether the security is traded on an exchange (including NASDAQ). DTC’s haircuts range from 2% to 100%. DTC’s haircut policy is reviewed at least annually, usually in conjunction with the renewal of its agreement with its line-of-credit banks. DTC’s Risk Management Committee is responsible for approving any changes in the established haircut levels. The market values of collateral securities are monitored daily based upon price and rating data provided by independent sources.

7. To what extent are collateral policies described in the written rules and procedures of the SSS?

DTC collateral policies are described in DTC’s Procedures.

F. Please describe the SSS’s use of limits on exposures to monitor or control risks.

1. Please explain the types of limit used and the exposures to which they apply.

DTC’s principal risk would arise from the failure of one or more of its Participants to settle their net debit obligations with DTC at the end of a business day. In order to assure that DTC is able to complete settlement on the day of a Participant failure, DTC maintains liquidity resources of $2.35 billion, including a cash Participants Fund and a committed line of credit. DTC also employs net debit caps, collateral requirements and the Largest Provisional Net Credit (“LPNC”) control.

DTC’s settlement system imposes net debit caps on all Participants. Each Participant’s net debit is limited throughout the processing day to a net debit cap that is the lesser of four amounts: (1) a net debit cap based on the three largest net debits that each Participant incurs over a rolling three-month period; (2) an amount, if any, determined by the Participant’s Settling Bank; (3) an amount, if any, determined by DTC; or (4) $1.8 billion (an amount that is $550 million less than the amount of DTC’s total liquidity resources).

As discussed above, DTC’s system requires that a Participant’s net settlement debit be fully collateralized.
The LPNC control is designed to address risks associated with DTC’s processing of maturity payments on MMIs. For most securities that pay principal at maturity, for example corporate or municipal bonds, DTC receives maturity proceeds from the issuer’s paying agent by Fedwire and does not credit these proceeds to Participants until they are received. For MMIs, however, maturities are handled differently. The issuer’s paying agent must be a DTC Participant. Early on the maturity date, maturity proceeds are automatically debited to the paying agent’s Participant account and credited to the accounts of Participants that have positions in the MMI. Until 3:00 P.M., however, these debits and credits are only provisional because the paying agent has until that time to inform DTC of its refusal to pay for the maturity. In such a case, DTC would invoke MMI issuer failure procedures which entail reversing all of that day’s activities in the issuer’s MMI, including any new issuances that day. All of these reversals would be processed without regard to the system’s collateral and net debit cap controls.

To help limit the risk to DTC arising from the combination of an issuer’s failure and a Participant’s failure to settle, DTC established the LPNC control. This control operates by prohibiting the Participant prior to 3:00 P.M. from using the largest net settlement credit it has received with respect to any single MMI issuer. This credit is not available as collateral, nor is it used in the calculation of the Participant’s net debit. The LPNC control is lifted after 3:00 P.M. in the absence of a refusal to pay.

2. **Do the limits apply to all participants and/or to other SSSs with which the SSS is linked? What are the exceptions to the limits?**

   The risk management controls apply to all Participants, including other SSSs that participate in DTC’s system.

3. **Do limits apply to participants individually or in the aggregate or both?**

   Risk management controls are applied to Participants on an individual basis.

4. **Do limits apply to implicit as well as explicit extensions of credit or securities (e.g., when on-deliveries of securities are permitted pursuant to provisional but not final delivery of securities)?**

   Reference is made to information provided in response to subsection V.E. above.
5. **Does the SSS automatically reject transactions that exceed limits or is compliance determined ex post?**

   DTC’s collateral monitor control systematically reviews each transaction to assure that if completed there will be enough collateral in the accounts of both the deliverer and the receiver to support the net debit of each.

   If a completed transaction will result in a net settlement debit that is either not fully collateralized or exceeds the Participant’s net debit, the transaction will be automatically blocked and pended.

6. **How are limit policies developed and reviewed?**

   DTC’s Risk Management Committee is responsible for developing limit policies. These policies are reviewed by DTC senior management and by the Audit Committee of DTC’s Board of Directors. DTC’s Compliance Department is responsible for the application of these policies.

7. **To what extent are limit policies described in the written rules and procedures of the SSS? Where does additional authority to set or amend limit policies reside?**

   DTC’s limit policies are described in its written Procedures. The authority to set or amend these policies coincides with the authority to amend DTC’s Procedures (as described in Section I above).

G. **Please describe other controls to mitigate or reduce risks at the SSS.**

1. **Does the SSS or its participants have the capacity to monitor participants’ accounts continuously during processing?**

   Each DTC Participant has the capability to monitor its own account on a real-time basis. DTC has the capacity to monitor all of its Participants’ accounts on a real-time basis.
2. **Is there a special risk control regime that the SSS would apply to a participant known to be experiencing financial difficulties?**

   DTC maintains relationships with other self-regulatory organizations so that there is an exchange of vital information concerning Participants’ operational and financial soundness. In the event of financial inadequacy, DTC carefully monitors a Participant’s daily activity and may exercise its right under its Rules to limit the Participant’s access to DTC services. Depending upon the circumstances, DTC could take the following possible courses of action:

   - Increase the Participant’s required deposit to the Participants Fund.
   - Lower the Participant’s net debit cap.
   - If the troubled Participant is a primary market maker or the specialist in an issue or issues, DTC could raise the haircuts in its collateral valuation of those securities.
   - Require the Participant to settle its net debit earlier in the day.
   - Request that the Participant arrange to clear its transactions through another DTC Participant and itself retire as a Participant.

3. **Does the SSS maintain or administer loss-sharing arrangements other than those applicable to events of default and addressed in Section VI above? Are these loss-sharing pools pre-funded by participants?**

   No. DTC does not maintain or administer loss-sharing arrangements other than as described in Section VI above.
IX. OPERATIONAL RISKS

A. Please provide assessments of the operational reliability of the computer and other systems used by the SSS, including any criteria that the SSS uses internally for this purpose.

1. What is the percentage uptime of the systems used by the SSS?
   (a) Whole system overall?
   (b) Broken down by major components (e.g., communications network, central processing facility)?
   (c) During critical processing periods?

2. Has the SSS experienced major operational problems during the past two years?
   (a) Have settlements been delayed, been disrupted or otherwise failed because of operational problems during this period?
   (b) Please describe the nature of any such problems.

DTC conducts self-assessments of the operational reliability of the depository’s computer and other systems, including communications networks, and reports the monthly results quarterly to the DTC Board of Directors. These reliability reports include hardware, software applications, on-time settlement performance and terminal systems performance. Definitions of these metrics follow:

- “Hardware Availability” is defined as the readiness of production system hardware to process deliveries and complete settlement. The period measured is 8:00 a.m. to 5:00 p.m., which covers peak Participant use. Outages are measured whenever a failure occurs that affects mission-critical systems that in turn delay Participant processing.

- “Software Availability” is defined as the ability of DTC’s software to operate without downtime. The period measured is 8:00 a.m. to 5:00 p.m., which covers peak Participant use. Outages are
measured whenever a failure occurs that affects mission-critical systems that in turn delay Participant processing.

- “On-Time Settlement Performance” is achieved if settlement cut-off and payment of credits are not later than 15 minutes beyond scheduled times and key prior cut-offs are not 30 minutes late.

- “Participant Terminal Availability” is defined as the availability of DTC’s Participant Terminal System (PTS) terminal network in Participant locations. The period measured is 8:00 a.m. to 5:00 p.m., which covers peak Participant use.

Over the period January 2000 through December 2001, the systems used by DTC were available at a rate of 99.85% overall and 99.865% during critical period processing, in both cases exceeding DTC’s goals. Statistics for critical period processing (between 8:00 a.m. and 5:00 p.m.) for major systems components are as follows -- Hardware Availability, 99.98%; Software Availability, 99.85%; On-Time Settlement Performance, 99.865%; Participant Terminal Availability, 99.866%.

DTC has not experienced any major operational problems during the past two years. DTC has never experienced a failure in its daily settlement.

B. Please describe contingency or disaster recovery planning at the SSS.

1. Does the SSS have a formal plan for business continuity in place?

2. Is this plan available for review by participants?

3. How often is this plan tested? Does this involve participants in the SSS?

4. What are the major elements of the business continuity plan?

5. How long would it take the SSS to resume operations if primary systems become unusable?

DTC maintains an alternate data center and has a state-of-the-art disaster recovery capability. This capability provides for full recovery of DTC’s entire system within one hour, with no loss of data. The system uses a remote data facility under which mainframe-based disk drives connected to the production mainframe immediately replicate any changes to disk drives on the
back-up system located at a separate site. Thus, in the event of a disaster at the primary production site data center, the back-up mainframe at a secondary site would be initialized for production using a complete duplicate set of production files maintained at the back-up site.

Extensive physical and environmental control systems are used in both the data centers. Backup emergency generators and an uninterrupted power supply are available and tested periodically. A command center for monitoring key environmental control systems is staffed 24 hours a day, seven days a week. Any potential problems result in an alarm sounding and trigger supervisory intervention. DTC periodically operates its production system and communications network from its alternate data center. New program code is extensively tested through established certification procedures before being moved to the production environment.

Internal systems contingency and disaster recovery testing is conducted weekly. Each weekend DTC tests the system by comparing a portion of the data between the two sites. The recovery processes are documented and practiced by DTC staff. DTC also switches primary and alternate processing sites on a quarterly basis thereby testing the disaster recovery processes with every Participant that utilizes the remote access capabilities of the depository.

Most of the depository’s business processes rely on operational activities as well as computer facilities. To ensure its ability to sustain business processes in the event of fire, flood, civil disturbance, or any other contingency affecting its operating premises, the depository has developed a Business Continuity plan; this plan is tested on an ongoing basis. The plan addresses a single catastrophic failure, such as the loss of one building. The plan details how critical operational units would displace less urgent functions in the event the critical operation’s facilities were not available.

DTC conducts disaster recovery tests for each mission critical operation on an ongoing basis. Testing varies from tabletop testing to actually closing departments and resuming operations at the contingency site.

The details of the disaster recovery plan are not available for review except by DTC’s regulators.
C. What are the key features of the internal controls covering operations and security at the SSS (e.g., change controls or those covering remote access)?

1. Please describe controls or security procedures in place to ensure that the SSS acts only on authentic settlement instructions from valid participants.

2. Are internal operational and security controls included in the internal and/or external audits of the SSS?

3. Are internal operational and security controls covered by regulatory requirements applicable to the SSS?

Annual risk assessments include the review of DTC’s primary data centers, the integrity of DTC’s computer processing, and possible security breaches.

In addition to verification procedures in place permitting Participants to verify that only valid settlement instructions have been received for compared trades, electronic access to DTC’s computers is generally controlled via leased lines and dial-in/call-back networks. User ID and password authentication is required in order to help prevent unauthorized transactions from entering DTC systems, to prevent security breaches and to establish accountability for transactions entered. In many cases, instantaneous confirmation of recorded transactions is available to Participants through PTS. Access to sensitive PTS functions requires the authorization of a DTC officer. All systems activity is logged and is available for reporting purposes as the need arises. Security violation reports are monitored and appropriate follow-up action is taken. Formal escalation procedures exist for reporting, investigating and resolving attempted security violations. The use of sensitive computer console commands is restricted via a console security system.

All securities transactions are included on daily activity statements given to Participants. Participants are responsible for reporting to DTC any problems with recorded transactions, and reported differences are followed up until resolved by DTC personnel.

A variety of measures are taken by DTC to protect the Data Center and Communications areas.

The systems development and maintenance activities also are controlled through the use of a separate test machine. An independent Certification Unit is responsible for transferring all application programs from test to production libraries and source code is recompiled prior to being moved
into production. Finally, standards and procedures over the certification process have been developed, documented and adherence by employees is required.

DTC works diligently to eliminate the possibility of access to sensitive data and records by unauthorized users and programs. Unauthorized access is prevented through awareness, organizational structure, prevention, accountability, and violation monitoring. The goal of DTC’s internal control structure is to ensure that the integrity of our production systems is never jeopardized. In addition to the authentication and access procedures described above, the internal control structure includes:

- A high-level Security Committee, which addresses key areas of risk associated with Information Services and directs that appropriate actions be taken to minimize risk; and
- An extensive Information Services Security Policy Statement (distributed to all employees annually), which helps ensure the accuracy and integrity of company data, the confidentiality of proprietary, personal, and other sensitive data, the continuance of data processing in the event of an emergency, company-wide awareness of the need for data security, and management participation in implementing the data security policy.

DTC’s internal operational and security controls are included in the internal and external audits of DTC and are covered by the regulatory requirements applicable to DTC. For example, the depository is subject to the SEC’s Automation Review Policy (ARP), under which the SEC evaluates various aspects of DTC’s data processing environment, including:

- Capacity planning processes.
- Systems development methodologies.
- Contingency planning processes.
- Security assessments.

In this connection, SEC technical staff makes annual on-site visits to DTC and confers with DTC staff from time-to-time throughout the year.

In addition to the internal and external audits described above, DTC has from time-to-time retained outside consultants to provide independent assessments of DTC’s systems and systems security.
D. Does the SSS impose minimum operational or performance standards on third parties (e.g., communications providers)?

1. How does the SSS ensure that such standards are met on a continuing basis and what sanctions are available to the SSS if they are not?

2. How would the SSS allocate losses incurred due to operational problems caused by third parties?

DTC imposes both operational and performance standards on its software vendors as part of its contractual agreements. Actual performance against standards is monitored as part of DTC’s ongoing systems reliability analysis and reporting.

In the event that losses are incurred by the depository as the result of operational problems caused by systems or applications software packages or external data provided by vendors (third parties), DTC will pursue a claim against the vendor. If DTC’s claim is not fully satisfied, any remaining losses not covered by DTC’s insurance will be satisfied from DTC’s retained earnings or the Participants Fund.

Attachments
In May 2001 Omgeo commenced operations. This organization is a for-profit global joint venture with Thomson Financial to provide global straight-through processing for institutional trading.
The following is a schedule of the times of certain significant settlement processing events. DTC’s complete processing schedule is included in DTC’s Reference Directory published monthly.

<table>
<thead>
<tr>
<th>Cutoff Time (Eastern Time)</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:15 PM</td>
<td>Underwriting syndicate closing.</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>Cutoff for DTC to be notified of the default of an MMI Issuer that would require the reversal of transactions in DTC’s system. Cutoff for the entry of most valued original transactions. The late delivery period begins. Participants can continue to enter valued and free transactions; however, most valued transactions require receiving Participant’s approval.</td>
</tr>
<tr>
<td>3:05 PM</td>
<td>Largest Provisional Net Credit (LPNC) procedures cease to be in effect. DTC begins using Participants’ actual collateral monitors and net settlement balances (instead of their simulated collateral monitors and net settlement balances) during the application of its risk management procedures.</td>
</tr>
<tr>
<td>3:10 PM</td>
<td>Recycle cutoff for valued transactions. All valued transactions that cannot complete due to insufficient position, collateral, or net debit cap are dropped from the system.</td>
</tr>
<tr>
<td>3:20 PM</td>
<td>End of the late delivery period. Cutoff for the entry of all valued original deliver orders.</td>
</tr>
<tr>
<td>3:55 PM</td>
<td>Participants’ DTC/NSCC cross-endorsement balances are calculated and applied to Participants’ accounts.</td>
</tr>
<tr>
<td>4:00 PM</td>
<td>Participants’ and Settling Banks’ settlement balances become final.</td>
</tr>
<tr>
<td>4:30 PM</td>
<td>Cutoff for Settling Banks to acknowledge their net-net settlement balance or refuse to settle for a specific Participant(s).</td>
</tr>
<tr>
<td>5:00 PM</td>
<td>Cutoff for DTC to receive payments for Settling Banks’ net-net debits. Once all Settling Bank payments have been received, DTC lifts risk management controls.</td>
</tr>
<tr>
<td>5:15 PM</td>
<td>DTC wires net-net credit payments to Settling Banks.</td>
</tr>
</tbody>
</table>