

9/24/97

**PARTICIPANTS TRUST COMPANY**

**COMMITTEE ON PAYMENT AND SETTLEMENT SYSTEMS  
INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS  
DISCLOSURE FRAMEWORK FOR SECURITIES SETTLEMENT SYSTEMS**

**I. Basic information**

A. *What is the name of the SSS?*

Participants Trust Company (“PTC”)

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

55 Water Street (26th floor)  
New York, New York 10041

PTC is located in the Eastern Time Zone of the United States.

C. *What functions does the SSS perform?*

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

PTC is a central securities depository and provides securities settlement services to its Participants.

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

PTC’s systems and features have been designed to service asset-backed debt securities.

Securities currently eligible for processing at PTC include mortgage-backed securities guaranteed by the Government National Mortgage Association (“GNMA”), the Department of Veteran’s Affairs (“VA”), and multi-class securities collateralized by GNMA securities and guaranteed by the Federal Home Loan Mortgage Corporation (“FHLMC”) or the Federal National Mortgage Association (“FNMA”).

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

See response to question I.C.1(a), above.

(c) *Please describe whether eligible securities are dematerialised, immobilised or transferred physically.*

Eligible securities are immobilized.

(d) *Does the SSS provide safekeeping for physical certificates?*

Yes (see response to questions I.E.2 and IV.A.1(a), below).

2. *Does the SSS provide cash accounts and/or provide funds transfers in conjunction with securities transfers?*

PTC does not maintain cash accounts for Participants.

PTC maintains accounts for Participants for the credit of securities. Intraday, PTC records cash balances to Participants' accounts for the purpose of crediting and debiting amounts payable under PTC's Rules with respect to such accounts, including amounts resulting from securities transactions versus payment.

Funds transfers between Participants are permitted only to reconcile differences in the contract value (cash amount) of a settled securities transaction, or to adjust principal and interest payments (PTC Rules, Article II, Rule 15).

*If so, in what currencies?*

All funds are denominated in U.S. dollars.

3. *Does the SSS provide a trade matching service?*

No. However, Participants may select an optional facility wherein a securities transfer received into the account of a Participant, which is based upon instructions entered by the delivering Participant, is compared to a list of pending transactions created by the receiving Participant. The match process is a management tool which makes the receiving Participant's reconciliation process more efficient by listing those transactions that did not meet its match criteria.

*Do others provide such services for securities settled at the SSS?*

No. However, the Mortgage Backed Securities Clearing Corporation ("MBSCC") performs trade matching on forward transactions prior to netting.

4. *Does the SSS provide a trade netting service (as distinct from undertaking the settlement of securities on a net basis)?*

No.

*Do others provide such services for securities settled at the SSS?*

MBSCC provides a trade netting service for mortgage-backed securities transactions that subsequently settle at PTC.

*In either case, what types of netting (bilateral or multilateral), if any, are performed?*

MBSCC performs multilateral netting.

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

No. However, PTC provides a mechanism for the efficient delivery of collateral covered by a repurchase agreement or other financing transaction, between Participants.

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

Yes.

*Which types of service are provided?*

PTC collects principal and interest payable with respect to eligible securities.

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

PTC's Rules provide, in effect, that PTC act as a counterparty to transactions with its Participants for (i) the receipt of securities subject to transfer versus payment and (ii) the net settlement of funds.

PTC's Rules provide that securities that are transferred versus payment are credited to a "Transfer Account" associated with the account of the receiving Participant wherein the securities are owned intraday by PTC (see response to question V.C.1, below).

8. *Other? Please specify.*

PTC's services include:

- Deposit/withdrawal of physical certificates representing securities.
- Processing of newly issued securities.
- Security redemption processing.
- Delivery/receive transaction processing.
- Transfer of collateral for repurchase agreements and collateralized financing transactions.
- Same day federal funds cash settlement.
- Segregation of securities to satisfy regulatory requirements.
- Timely collection/distribution of principal and interest.
- Reconciliation and adjustment of principal and interest for missing or incorrect payment information.
- Credit of principal and interest to original owner in repurchase agreements and collateralized loans.
- Post-settlement adjustment of principal and interest on failed deliveries.

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

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

PTC is a private sector entity.

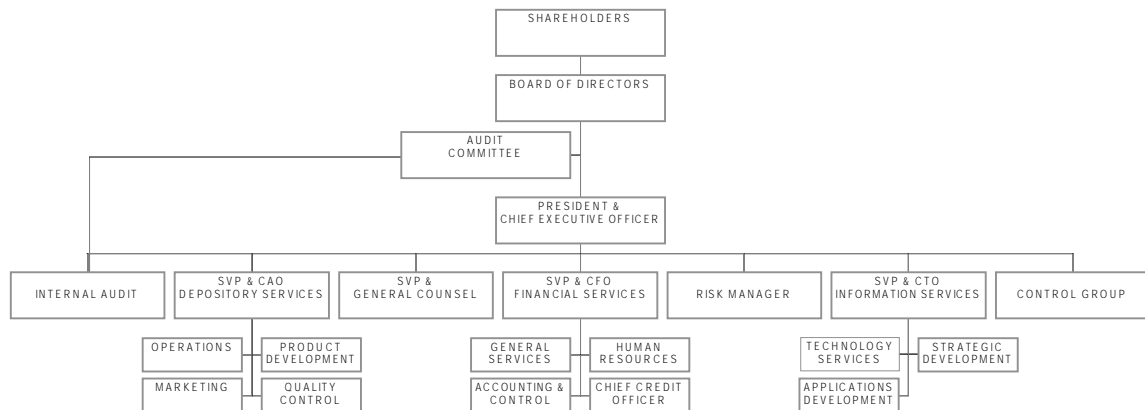
2. *Please indicate whether the SSS is organised on a for-profit or a non-profit basis.*

PTC is organized on a for-profit basis, although excess profits are returned to Participants in the form of a rebate.

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

PTC is incorporated as a limited purpose trust company under the banking laws of the State of New York. PTC's Rules and Participant Agreements provide that PTC's Rules and Procedures, and the respective rights and obligations of PTC and its Participants, are governed by the laws of New York. Accordingly, transactions in PTC are governed by the New York Uniform Commercial Code and PTC is a "clearing corporation" under Article 8 of the Uniform Commercial Code. In addition, PTC is a registered "clearing agency" under Section 17A of the Securities Exchange Act of 1934 and a member of the United States Federal Reserve System. PTC is, therefore, subject to regulation under federal and state statutes and regulations, including those applicable to banks and to transactions in securities, and to regulation by the United States Securities Exchange Commission ("SEC"), the Board of Governors of the Federal Reserve System, the Federal Reserve Bank of New York and the New York State Banking Department.

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



1. Who are the owners of the SSS?

PTC is owned by 30 of its 52 Participants.

2. What entity or entities operate the SSS?

PTC personnel operate PTC, under the direction of PTC's management and Board of Directors.

*Which functions of the SSS, if any, are outsourced to third parties?*

Safekeeping of physical certificates is provided by The Depository Trust Company under contract to PTC.

3. Does the SSS have a Board of Directors?

PTC is governed by a Board of Directors elected by its stockholders.

(a) What is its composition?

PTC's Board of Directors consists of fifteen directors divided into three classes, each class consisting of five directors. Directors in each class are elected by the stockholders for a three-year term. The term of each class expires in successive years so that the term of one-third of the directors expires at the time of each annual meeting of stockholders.

The Chairman of the Board, the Vice Chairman and the President are elected by the Board of Directors from among its members. Currently, the only member of the Board of Directors who is a full-time employee of PTC is the President.

(b) What are its responsibilities?

PTC's Board of Directors is responsible for managing the affairs of the company and establishing its strategic direction.

Major standing committees of the Board are:

Audit Committee (members may not be officers of the company)  
 Compensation Committee  
 Employee Benefits Policy Committee  
 Nominating Committee

In addition, the following committees of non-Board members report directly to the Board:

Credit Committee  
 Operations Committee  
 Risk Management Committee

*F. Please describe the financial resources of the SSS.*

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

As of December 31, 1996, PTC's stockholders' equity consisted of paid-in capital of \$15,000,000 and retained earnings of \$5,073,000.

*2. Guarantees, insurance coverage or similar arrangements?*

PTC maintains insurance coverage to protect against significant financial exposure to loss resulting from insurable risks including bankers blanket bond, lost instrument bond, errors and omissions, commercial liability, property damage and workers' compensation.

*3. Credit lines or letters of credit?*

PTC maintains committed credit lines totaling \$2 billion with a consortium of banks to fund end-of-day settlement in the event of a Participant's failure to make timely payment.

PTC maintains an uncommitted credit line with several banks to finance the disbursement of uncollected principal and interest to its Participants, up to an aggregate borrowing of \$1 billion.

Mandatory deposits to a Participants Fund (see response to question III.A.1, below) secure Participant obligations to PTC and provide an additional source of cash collateral to meet PTC's temporary financing needs.

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

Participants that fail to make timely payment are assessed for (a) the costs of any borrowing to finance end-of-day settlement, (b) interest on funds advanced by PTC, (c) fines and (d) other costs resulting from the default (PTC Rules, Article II, Rule 6, Section 3).

If PTC suffers a loss following liquidation of the collateral of a defaulting Participant (e.g. due to adverse market movements), PTC's Rules provide for the assessment of all Participants which delivered securities versus payment to the defaulting Participant in proportion to the relative dollar value of such deliveries. The Rules further provide that, if any Participant defaults in payment of an assessment, PTC will assess all Participants which delivered securities versus payment to the Participant that defaulted on its assessment. This process is repeated until the loss has been covered, in full, or there are no more Participants subject to assessment (PTC Rules, Article II, Rule 6, Section 6). Any losses that are not covered by the assessment of Participants are charged to PTC's stockholders' equity.

Except as otherwise provided under applicable law, PTC is not authorized to assess its stockholders. Under New York Banking Law, stockholders of a trust company, such as PTC, may be assessed to make-up a deficiency in the capital of the trust company. If the stockholder fails to pay the assessment, its stock in the trust company may be sold and the proceeds applied to the assessment.

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

PTC is regulated by the New York State Banking Department, the Federal Reserve Bank of New York, the Board of Governors of the Federal Reserve System and the SEC.

## **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.

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

When a Participant initially joins PTC, it receives a complete set of PTC's Rules and Procedures, and may obtain further copies thereafter. Procedures are published in the form of a Participant Operating Guide and Data Entry Guide. Amendments to the Rules and Procedures are disseminated to all Participants by administrative bulletins which explain the changes and transmit any revised pages.

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

Administrative bulletins and other documents which specifically address matters covered in the Rules and Procedures have the same status as the Rules and Procedures.

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

Changes to PTC's Rules and Procedures are subject to internal review by all affected areas and require senior management approval. Participant views are solicited and, when applicable, proposed changes are reviewed by the appropriate committees reporting to the Board of Directors (e.g. credit, operations, risk management). Changes to PTC's Rules must be approved by the Board of Directors.

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

Proposed rule changes must be filed with the SEC and the Federal Reserve Bank of New York, in accordance with Section 19(b) of the Securities Exchange Act of 1934 and Rule 19b-4 promulgated thereunder. As provided therein, certain proposed rule changes of a material nature are not effective until approved by order of the SEC after publication; other proposed rule changes may be effective upon filing with the SEC (e.g. proposed rule changes which are strictly administrative in nature).

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

Participants are notified of changes in PTC's Rules and Procedures by administrative bulletins which explain the changes and transmit any revised pages. Any amendment to the Procedures that PTC believes may materially increase risks to Participants is distributed at least fifteen days prior to its effectiveness (PTC Rules, Article VI, Rule 11).

- (c) *Is there a procedure for participants or others to comment on proposed rule changes?*

As part of the legally required regulatory procedures, PTC's proposed rule changes are published for comment by the SEC prior to their approval.

PTC issues an administrative bulletin to Participants at the time a proposed rule change is filed with the SEC, explaining the purpose and effect of the proposed change and soliciting Participant views (PTC Rules, Article VI, Rule 10).

- B. *Are the rules and procedures binding on the SSS as well as its participants?*

PTC's Rules and Procedures are binding on PTC as well as its Participants.

*Under what conditions and on whose authority can written rules and procedures be waived or suspended by the SSS?*



PTC's Rules provide that under extraordinary circumstances, the time periods set forth in the Rules or Procedures may be shortened or extended, or any action required by the Rules or Procedures may be waived or suspended, by PTC if it believes that such adjustment, waiver or suspension is necessary or desirable and in the best interest of Participants (PTC Rules, Article VI, Rule 12).

### **III. Relationships with participants**

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

PTC has three types of participants: full service Participants; Limited Purpose Participants; and Federal Reserve Participants (PTC Rules, Article IV, Rule 1, Sections 1, 2 and 2A).

1. *How do the types differ?*

#### ***Full Service Participants***

Full service Participants may process all types of book-entry transactions through the following types of accounts:

Proprietary Accounts, for transactions effected by the Participant as principal, versus payment or free, and associated Segregated Accounts;

Agency Accounts, for transactions effected by the Participant as agent on behalf of a third party, versus payment or free, and associated Segregated Accounts;

Pledgee Accounts for the receipt of collateral for financing transactions, versus payment or free, wherein the Participant is acting as principal or as agent;

Hold-in-Custody Accounts for the transfer of securities, free of payment, from the Participant's Proprietary or Agency Account for the segregation of securities generally subject to a financing transaction; and

Limited Purpose Accounts, wherein the securities are held for original issue or as collateral for collateralized mortgage obligations.

PTC has a lien on securities held in Proprietary and Agency Accounts, but not on securities held in Segregated Accounts, Pledgee Accounts or Hold-in-Custody Accounts. PTC does not have a lien on securities or cash in a Limited Purpose Account.

Full service Participants are required to make a mandatory deposit to the Participants Fund equal to the greater of \$1,000,000 or an amount based on a formula related to activity (1% of the Participant's average gross debits for the prior months three designated GNMA settlement days), up to a maximum of \$10,000,000.

#### ***Limited Purpose Participants***

Limited Purpose Participants may only have Limited Purpose Accounts. As noted above, PTC does not have a lien on securities or cash in a Limited Purpose Account. Limited Purpose Participants are prohibited from receiving securities versus payment.

Limited Purpose Participants are required to make a mandatory deposit to the Participants Fund of \$50,000.

### ***Federal Reserve Participants***

Federal Reserve Participants are Federal Reserve Banks which choose to join PTC for the purpose of maintaining Pledge Accounts for the receipt of securities, free of payment, as collateral for discount window borrowings and other obligations to Federal Reserve Banks.

Federal Reserve Participants are exempt from some of the obligations applicable to full service Participants and Limited Purpose Participants. The most significant exemptions are that they are not required to (i) indemnify PTC or any licensor or provider of data processing services to PTC, (ii) furnish periodic financial reports and open books and records for inspection by PTC, (iii) pay fees, fines or assessments, (iv) contribute to the Participants Fund, or (v) submit disputes to arbitration. In addition, PTC has a different standard of care for the performance of its duties, other than those pertaining to the custody of securities, for Federal Reserve Participants (see response to question III.G, below).

2. *Within each membership category, are all participants subject to the same rules and procedures?*

Yes.

*Please describe important exceptions, including both differences in rules across participants and the rationale for these differences.*

Not applicable.

*B. Can Participants establish accounts for their customers' assets that are segregated from their own asset accounts at the SSS?*

PTC's Rules provide that securities held by a Participant as principal are to be held in a Proprietary Account, and securities held by a Participant acting on behalf of a third party are to be held in an Agency Account (PTC Rules, Article II, Rule 1, Section 1).

PTC's Rules provide that any securities which have been fully paid for by the Participant's customer or the customer of the party for which the Participant is acting as agent must be held in a Segregated Account associated with the Proprietary or Agency Account.

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

Participants may choose to establish an omnibus Agency Account or individual Agency Accounts when they are acting as agent for a third party, and one or multiple Segregated Accounts associated with each Proprietary or Agency Account.

*2. Is the segregation optional or compulsory?*

Participants are required to maintain separate accounts for proprietary and agency securities, and to segregate all customer fully paid securities (PTC's Rules, Article II, Rule 1, Section 4).

*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?*

The establishment of an account by a Participant that contains the name of a third party does not give any rights to such third party. PTC's Rules, Procedures and Participants Agreement establish the rights and responsibilities of PTC and its Participants.

Participants are responsible for any actions taken on behalf of themselves or their customers. By maintaining an account at PTC, Participants represent and warrant that such account is maintained in conformity with applicable laws and the terms of any applicable customer agreement (PTC Rules, Article II, Rule 1, Section 4).

Participants are required to indemnify PTC against any losses arising from claims of third parties relating to the custody of securities, unless PTC's conduct violated the standard of care for deposited securities as set forth in Article VI, Rule 6, Section 1 of PTC's Rules (see response to question III.G, below) (PTC Rules, Article IV, Rule 1, Section 12(b)).

PTC's liability to Participants (other than Federal Reserve Participants) and third parties arising from its failure to perform any depository service is limited to liabilities attributable to willful misconduct, gross negligence, fraud or criminal acts by PTC, its officers, employees or agents (PTC Rules, Article VI, Rule 6, Section 2) (see response to question III.G, below).

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

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

PTC's Rules do not require a Participant to be domiciled in a particular jurisdiction. However, at the present time, participation criteria and financial standards have been defined only for entities domiciled in the United States.

2. *Are participants required to be subject to a supervisory regime?*

All Participants are currently required to be subject to supervision by a governmental regulator.

*If so, please describe.*

Entities eligible to become full service Participants include: banks and thrift institutions which are subject to regulation by the Federal Reserve or a state banking department; insurance companies which are subject to regulation by state insurance departments; broker-dealers, investment companies and clearing agencies registered with the SEC; and federally chartered corporations engaged in the purchase and/or securitization of mortgage-related assets (PTC Rules, Article IV, Rule 1, Section 1).

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

No. Participants are not required to be stockholders in PTC. However, only Participants are eligible to purchase or hold PTC stock.

4. *Are there financial, economic, personal or other requirements (e.g. minimum capital requirements, "fit and proper" tests)?*

Applicants are evaluated on the basis of capital adequacy and financial stability, operational soundness, financial resources, and regulatory oversight (PTC Rules, Article IV, Rule 1, Section 3).

*If so, please describe.*

### ***Capital adequacy and financial stability***

Each Participant, itself, or through its parent company's guarantee, must maintain net worth and financial stability commensurate with its potential liability to PTC. For broker-dealers, a net regulatory capital guideline of \$50 million has been established. For banks, other financial institutions and federally chartered corporations, an equity capital guideline of \$100 million, determined in accordance with generally accepted accounting principles, has been established. Limited Purpose Participants which are issuers or warehouse lenders must maintain equity capital of \$10 million.

PTC may, however, impose greater or lesser capital requirements based upon the value of positions to be maintained with PTC, the anticipated volume and risk of transactions an applicant proposes to process through PTC and the overall financial condition of the applicant.

### ***Operational soundness***

Each applicant must demonstrate that it has the operational capability to comply with PTC's Rules and Procedures. This includes on-line access and staff proficiency in day-to-day operating procedures.

### ***Financial resources***

Each applicant must demonstrate that it has secured adequate, timely financing arrangements to satisfy intraday and end-of-day cash settlement obligations to PTC.

### ***Regulatory oversight***

Each applicant must not have violated material regulations imposed by the regulatory agencies having jurisdiction over it, or otherwise been convicted for, or undergone official censures in connection with, certain criminal or fraudulent acts.

*D. Does the SSS engage in oversight of its participants to ensure that their actions are in accordance with its rules and procedures?*

A quarterly review is performed for each Participant to ensure that they maintain the required operational and financial strength. In addition, PTC monitors publicly available information relative to its Participants and is a party to an information sharing arrangement with other clearing agencies and depositories designed to identify conditions of common participants which may create exposure.

*If so, please describe.*

Updated financial statements and previous quarters compliance with Rules and Procedures are analyzed for each Participant. If it is determined at any time that a Participant deviates from PTC's operational or financial standards, PTC may cease to act for the Participant or, if the deviation is of a nature that does not warrant PTC to cease to act on the Participant's behalf, the Participant is placed on a "watch list" and monitored until the situation is cured.

*E. Under what conditions can participants terminate their membership in the SSS?*

Participants may voluntarily terminate their membership in PTC upon ten days prior written notice to PTC (PTC Rules, Article IV, Rule 2).

*Does this mark the end of all liabilities of the participant?*

A Participant which withdraws from PTC will have no further liability after all transactions pending at the time it ceases to be a Participant have been closed and any amounts payable as a result of prior transactions have been satisfied, except in connection with any payments made by PTC under limited cross guaranty agreements (explained below). After these potential obligations have been satisfied, PTC will return the withdrawing Participant's deposit to the Participants Fund (PTC Rules, Article V, Rule 2, Section 7).

*If not, please describe what liabilities could remain.*

PTC may enter into limited cross guaranty agreements with other clearing organizations, pursuant to which the clearing agencies cross-guarantee certain obligations of common Participants, in the event the Participant defaults to one clearing agency at a time when it has excess collateral available to the other clearing agency. In the event PTC makes a payment to another clearing agency with respect to a common Participant, the Participant or former Participant remains liable to PTC in the amount of such payment and, if PTC ceases to act for such Participant, PTC is not required to return excess collateral to the Participant until the cross-guarantee obligations are finally determined and paid in full (PTC's Rules, Article IV, Rule 9).

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

PTC will cease to act for a Participant which (i) notifies PTC that it is unable to meet its obligations or is insolvent, (ii) is determined to be insolvent by a court or agency which regulates it, (iii) institutes or consents to the institution of bankruptcy proceedings against it or (iv) makes an assignment for the benefit of creditors (PTC Rules, Article IV, Rule 4).

In addition, PTC may cease to act for a Participant, in respect to a particular transaction or to transactions generally, which (i) failed to make timely payment of any amount due PTC, (ii) no longer meets the qualifications for participation, (iii) PTC reasonably believes to be responsible for fraudulent or dishonest conduct, or has made a material misstatement or omission, in connection with a transaction processed by PTC, (iv) has materially violated any PTC Rule, Procedure or agreement, (v) PTC reasonably believes to be in, or approaching, financial difficulty or (vi) PTC has reasonable grounds to believe that ceasing to act is necessary for the protection of investors or other Participants or to facilitate the orderly and continuous performance of PTC (PTC Rules, Article IV, Rule 3).

PTC's decision to cease to act for a Participant may be appealed by the Participant. Appeals will be heard by a panel appointed by PTC's Board of Directors (PTC Rules, Article VI, Rule 7).

*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).*

PTC will maintain, and will require any custodian to maintain, the same degree of ordinary care with respect to the custody of securities as is given to similar property held by banks generally.

PTC will use its best efforts to timely perform its other duties (other than those pertaining to the custody of securities), but is liable only to the extent losses are (i) incurred by a Federal Reserve Participant, and attributable to the failure to exercise ordinary care by PTC, its officers, employees or agents, or (ii) incurred by a Participant, Limited Purpose Participant or Federal Reserve Participant, and attributable to willful misconduct, gross negligence, fraudulent or criminal acts by PTC, its officers, employees or agents.

*Where are these liabilities and their limitations set out (e.g. in statute or contract)?*

The above standards of care are set forth in PTC's Rules: Article VI, Rule 6, Sections 1 and 2, and Article IV, Rule 1, Section 2A.

**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?*

See the response to question III.E, above, regarding limited cross guarantee agreements, one of which is currently in effect between PTC and MBSCC.

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?*

The Depository Trust Company ("DTC") acts as custodian for PTC of all physical securities deposited or issued through PTC.

*Where is it located?*

55 Water Street  
New York, New York 10041

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

Not applicable. No securities are transferred between PTC and DTC as a result of this relationship.

- (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.*

Not applicable.

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

DTC safekeeps physical certificates representing securities on behalf of PTC. No other custody services are provided.

DTC is required, at its expense, to replace any securities in its custody which are lost, stolen or misappropriated. Under the custody agreement, DTC is required to maintain bankers blanket bond insurance to cover the loss of securities held in its vault for PTC.

- 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.*

Mellon Bank, N.A. provides lockbox services for PTC for the collection of principal and interest payments on GNMA I securities.

- 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.*

Providers of services to PTC are subject to credit review and are required to satisfy financial criteria consistent with PTC's exposure to losses related to the provided services. Providers must also have demonstrated ability to comply with PTC's operational performance standards.

As noted in the response to question IV.A.1(d), above, PTC requires its custodian to maintain insurance to cover losses related to its provision of custody services.

- D. *Does the SSS advance funds or securities to or on behalf of other intermediaries such as issuing or paying agents?*



Yes.

*If so, please identify the circumstances in which such exposure could arise.*

PTC disburses principal and interest on GNMA I securities to Participants on the next business day following the scheduled payable date, irrespective of whether the funds have been collected from issuers and paying agents. PTC advances its own funds, borrowed funds and the cash portion of mandatory deposits to the Participants Fund. Advances are secured by the principal and interest receivable.

If the issuers, paying agents or GNMA, as guarantor of the securities, fail to make timely payment, Participants are obligated to repay any advances of such principal and interest not received.

*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.*

Measures in place to protect PTC and its Participants against the failure of the custodian or lockbox agent to meet their obligations to PTC include (i) the contractual requirement that the custodian bear the financial risk of missing securities, and (ii) the transfer of available funds from PTC's lockbox accounts to its account at the Federal Reserve Bank of New York on a daily basis.

PTC and its Participants are protected against the failure of an issuer or paying agent since all securities eligible for processing at PTC are guaranteed as to timely payment of principal and interest by the United States Government or an agency or instrumentality thereof.

## **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.*

Settlement instructions are not matched at PTC prior to processing.

1. *Is matching required for all transactions without exception?*

Not applicable.

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

Not applicable.

3. *Are matched settlement instructions binding on participants?*

Not applicable.

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

Not applicable.

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

Not applicable.

(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.*

Not applicable.

B. *Are securities transferred within the SSS registered?*

1. *Who is the registrar?*

The registrar for GNMA securities is The Chase Manhattan Bank.

The registrar for VA securities is Bankers Trust Company of California.

The registrar for FHLMC securities is FHLMC.

The registrar for FNMA securities is FNMA.

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?*

All securities on deposit at PTC are registered in the name of its nominee, MBSCC & Co.

*Are there instances in which securities housed within the SSS are registered to neither the SSS (or its nominee) nor the beneficial owner?*

None.

3. *If the SSS offers custodial services, will it hold securities registered in the name of the beneficial owner?*

No. All securities held by PTC's custodian on behalf of PTC are held in the name of PTC's nominee, MBSCC & Co.

4. *Under what circumstances does the SSS initiate registration of securities in the buyer's name?*

When securities are withdrawn from PTC, PTC will request reregistration from the registrar/transfer agent on behalf of the Participant making the withdrawal.

5. *How long does the registration process typically take?*

PTC Participants may request that withdrawn securities be made available for pick-up at PTC's custodian for physical securities on the same day, next day or second business day following the request for withdrawal.

*Are participants notified when registration is complete?*

Reregistered certificates are available at the times published by PTC in the Procedures, on the day selected by the Participant in its withdrawal request.

6. *Can securities be transferred within the SSS before registration in the buyer's name is complete?*

No. At the time the withdrawal request is entered onto the PTC system by the Participant, the securities are removed from the Participant's account thereby making them unavailable for transfer on PTC's system.

*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?*

Not applicable.

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.*

Securities may be transferred either versus payment, involving an obligation on the part of the receiving Participant to fund the transfer within the PTC system, or not versus payment (i.e. "free"). If the securities transfer is not versus payment, the securities will be debited from the account of the delivering Participant and credited directly to the account of the receiving Participant. If the transfer is versus payment, the securities are credited to a "Transfer Account" associated with the account of the receiving Participant wherein the securities are owned intraday by PTC.

Under PTC's Rules, PTC acquires the entire interest in securities credited to a Transfer Account, subject to a security interest granted by PTC to all Participants that are in a net credit cash position at PTC. This lien (the "Participant Intraday Collateral Lien", or "PICL") secures PTC's obligation to pay credit balances to Participants, and provides for the delivery of paid-for securities to Participants in the event of PTC's insolvency and failure to settle. Securities held in a Transfer Account are credited to the account of the receiving Participant at end-of-day settlement, if the receiving Participant satisfies its settlement obligation to PTC and system-wide settlement occurs.

Securities in a Transfer Account may be retransferred intraday by the receiving Participant to the Transfer Account associated with another Participant account in a transaction versus payment, or free to another Participant account.

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

Securities transactions are processed continuously during the on-line processing day.

3. *If continuous, during what hours does the processing occur?*

Intra-Participant transaction processing (e.g. transfers of securities from Segregated Accounts) and returns of financing transaction collateral using PTC's Collateral Loan Facility ("CLF") starts at 7:00 a.m. Inter-Participant processing begins at 8:30 a.m. and ends at 3:30 p.m., with the period from 3.00 p.m. to 3:30 p.m. reserved for reversals (e.g. delivery errors). Processing of CLF transactions versus payment continue until 4:00 p.m. Securities segregation and processing of free CLF transactions ends at 6:00 p.m. Bulk input of pending transactions ends at 5:00 a.m.

*If in batches, at what time or times is the processing initiated and completed?*

Not applicable.

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

Settlement of all security types occurs daily. However, a significant portion of PTC's settlement activity occurs on the days designated by the Public Securities Association for

the settlement of forward transactions in specific security types. There are three such days each month covering GNMA securities.

*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.*

All funds settlements are made by wire transfer of same day funds to/from PTC's account at the Federal Reserve Bank of New York.

*1. Does the SSS maintain cash accounts for its participants?*

No. PTC does not 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?*

Not applicable.

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

Participants may make optional cash deposits to the Participants Fund for the purpose of prefunding payment of a debit balance or to provide additional collateral to secure the Participant's debit obligations to PTC. Prefunding cash is maintained in PTC's account at the Federal Reserve Bank of New York.

The cash portion of mandatory deposits to the Participants Fund is maintained in PTC's account at The Bank of New York.

*3. Under what circumstances does the SSS provide credit extensions or advances of funds to its participants and thereby expose itself to credit risk?*

Intraday, debit and credit cash entries are posted to Participants' accounts as a result of transactions such as securities transfers versus payment. To limit the amount of credit risk exposure to PTC from any single Participant, no Participant may incur a net debit balance that exceeds PTC's committed end-of-day credit lines. In addition, all debit balances in Participant accounts must be fully collateralized at all times (see response to question VI.B.2, below).

*4. How long can such credit extensions last?*

Participants with a net debit balance in their accounts are required to pay such debit balance by wire transfer of same day funds to PTC's account at the Federal Reserve Bank of New York, prior to 4:30 p.m.

*How long do they typically last?*

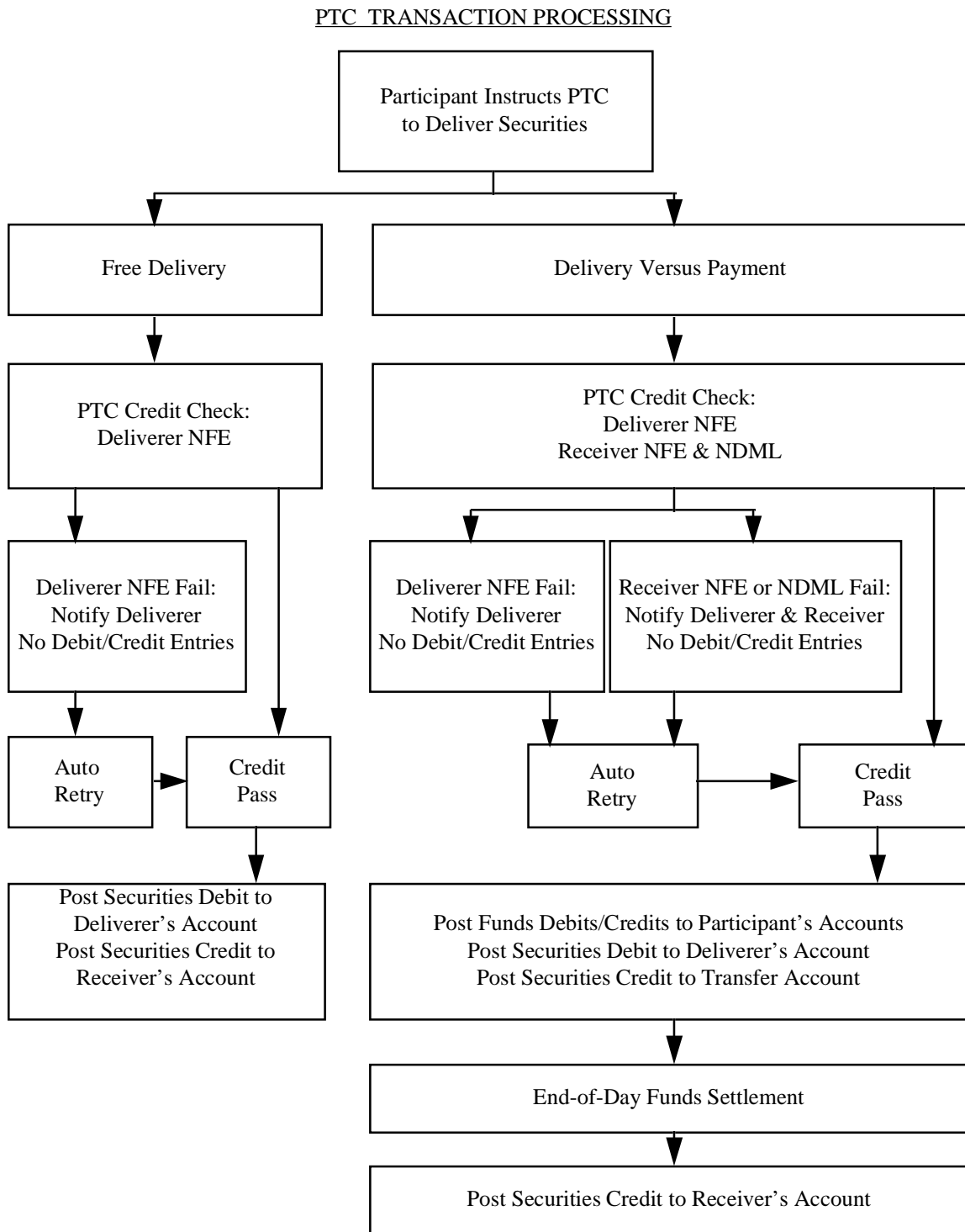
Participants typically satisfy their debit obligations to PTC prior to the 4:30 p.m. funds settlement deadline.

*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).*

PTC is a DVP system consistent with model 2 as described in the DVP Report. Securities transfers are settled on a gross transaction by transaction basis throughout the processing day, while funds are settled on a net basis at the end of the processing day.

Securities transfers are final when they are credited to the account or the associated Transfer Account (see response to question V.C.1, above) of the receiving Participant. Subject to compliance with PTC's credit and liquidity safeguards, the receiving Participant may retransfer the securities prior to end-of-day cash settlement. Transfers may not be rescinded by the delivering Participant or PTC, and are not subject to an unwind if the receiving Participant fails to settle its net funds debit. In the event that the receiving Participant fails to settle a debit balance, securities in its account or the associated Transfer Account are pledged as collateral for loans used by PTC to achieve settlement (see response to question VI.B, below). The securities will not be credited to the defaulting Participant's account until the default is cured.

Please also provide a diagram indicating the timing of events in the processing of securities and funds transfers in the SSS.



NFE = Net Free Equity (see response to questions VI.B.2 and VIII.C.1, below)  
 NDML = Net Debit Monitoring Level (see response to questions VI.B.2 and VIII.F.1, below)

*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.*

Not applicable.

1. *Are funds transfers and securities transfers processed within the same system or in different systems?*

PTC processes funds and securities transfers within the same system.

*If different, how are they linked?*

Not applicable.

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

Each securities transfer is linked to a specific funds transfer on a transaction by transaction basis. PTC's system calculates a running balance of funds debits and credits in Participants' accounts.

- (b) *Does the SSS "split" large transactions into multiple transactions or require participants to do so?*

PTC's system is set at a single transaction limit of \$1 billion.

2. *When do securities transfers and funds transfers become final?*

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

Securities transfers are final (i.e. the deliverer's obligation is discharged) when the securities are credited to the account of the receiving Participant (in a transaction not versus payment) or the Transfer Account (see response to question V.C.1, above) associated with the account of the receiving Participant (in a transaction versus payment).

- (b) *At what time do funds transfers become final? After what event or events?*

Funds transfers, which are irrevocable at the time the related securities transaction is processed, become final at end-of-day settlement. At the close of inter-Participant book-entry processing of transactions versus payment (4:00 p.m.), the net funds balance in a Participant's account represents the Participant's final settlement obligation. Participants with a net debit balance in their accounts are required to wire same-day funds to PTC's



account at the Federal Reserve Bank of New York, and PTC, in turn, wires same-day funds to Participants with net credit balances. PTC will not disburse funds to Participants with net credit balances until all debit payments have been received.

*Does this timing allow for same-day retransfer of funds received in exchange for securities?*

PTC's end-of-day settlement is scheduled to provide sufficient time for Participants to retransfer funds received from PTC prior to the close of the Federal Reserve Bank's payments system.

- (c) *If final delivery of securities precedes the final transfer of funds, can participants dispose freely of such securities prior to funds finality?*

Subject to compliance with PTC's credit and liquidity safeguards (collateral requirements and net debit limits), Participants may retransfer securities, prior to end-of-day cash settlement, to effect a withdrawal or delivery of the securities to another of its accounts (including a Segregated Account) or to the account of another Participant.

*If so, what actions will be taken if funds are not received?*

PTC will implement its default procedures as described in the response to question VI.B.3, below.

- (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?*

Not applicable. Securities finality precedes funds settlement.

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

No. The transfer of all security types is final when credited to the account, or the Transfer Account associated with the account, of the receiving Participant. All funds transfers settle only in U.S. dollars, and are final at end-of-day settlement.

*Please describe.*

Not applicable.

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

Participants are notified of securities transfers when they are final (*i.e.* credited to the receiving Participant's account or the Transfer Account associated with the account). Securities transfers are not recorded in a provisional status.

To facilitate settlement, if a transaction would result in the receiving Participant's failure to comply with PTC's credit and liquidity controls, the delivering and receiving Participants are notified that the transaction is pending. No entries, however, are made to either the delivering or receiving Participants' accounts until the failure is cured.

Intraday provisional net funds balances are reported continuously to Participants on-line. As noted in the response to question V.E.2(b), above, Participants are notified of final funds balances at the close of processing for inter-Participant book entry transactions versus payment.

*F. Does the SSS itself "guarantee" funds or securities transfers?*

No

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

None.

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

Not applicable.

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

Not applicable.

## **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 solvency under the applicable laws of its jurisdiction?*

PTC will cease to act for a Participant which (i) notifies PTC that it is unable to meet its obligations or is insolvent, (ii) is determined to be insolvent by a court or agency which regulates it, (iii) institutes or consents to the institution of bankruptcy proceedings against it or (iv) makes an assignment for the benefit of creditors (PTC Rules, Article IV, Rule 4). If the Participant has any unpaid obligations to PTC, PTC may withhold payment of credit balances and exercise its rights with respect to securities, in any Transfer Account or account of the Participant in which PTC has a lien (PTC Rules, Article IV, Rule 6).

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

If a Participant fails to fully satisfy an outstanding debit balance prior to the time published by PTC in its Procedures (4:30 p.m.), PTC will implement its default procedures as described in the response to question VI.B.2, below.

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.*

In those instances where PTC's Rules and Procedures grant discretion in the use of default or other exceptional procedures, such discretion will be exercised by the President of PTC in consultation with the Senior Vice Presidents.

In addition to a Participant's insolvency or failure to make timely payment, PTC's Rules authorize PTC to cease to act for a Participant, in respect to a particular transaction or to transactions generally, under certain circumstances (see response to question III.F).

In the event of a Participant's failure to make timely payment of a debit balance at end-of-day settlement, the processing of transactions in the accounts of the defaulting Participant is suspended until the default is cured. PTC, with the consent of its lenders, however, may authorize the continuation of transaction processing in the defaulting Participant's accounts (PTC Rules, Article II, Rule 6, Section 2). Such authorization may be made if, for example, continued processing would reduce the amount of the defaulting Participant's outstanding obligation.

If the defaulting Participant fails to cure its default prior to the time specified in the Procedures (10:00 a.m. on the next business day), PTC is entitled to liquidate the collateral of the defaulting Participant (PTC Rules, Article II, Rule 6, Section 4). PTC may elect to delay liquidation if the defaulting Participant is solvent and the current market value of the collateral, net of applicable haircuts, is sufficient to cover the outstanding obligation.

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?*

As noted in the response to question VI.A.3, above, if a Participant fails to make timely payment of its end-of-day settlement obligation, PTC will suspend the processing of transactions in the accounts of the defaulting Participant. Participants attempting to deliver securities to the defaulting Participant will be notified that such transactions will not be processed. If the default is not cured prior to the time published in the Procedures (10.00 a.m. on the next business day), PTC will notify all Participants that it has ceased to act for the defaulting Participant and will state, in general terms, steps to be taken in connection with pending matters.

If the Participant default cannot be covered by PTC's own funds or its \$2 billion committed credit line (e.g. multiple Participant default), PTC will notify all Participants at the time they are solicited for voluntary secured loans (see response to question VI.B.2, below).

PTC will notify all Participants, as soon as possible, when it has ceased to act for an insolvent Participant and will state, in general terms, steps to be taken in connection with pending matters (PTC Rules, Article IV, Rule 4, Section 4).

2. *Would the SSS be expected to continue to meet all its obligations to participants under these circumstances?*

PTC's Rules and Procedures have provisions which enable it to achieve settlement in the event of a Participant default.

*Please discuss the resources in place to ensure that this would occur (e.g. collateral, participant's fund, insurance, loss-sharing arrangements, etc.).*

PTC employs the following resources and controls to ensure its ability to settle in the event of a Participant default:

### ***Participants Fund***

PTC maintains a Participants Fund for each Participant which includes mandatory and optional deposits of both cash and securities. Optional deposits and a portion (currently 20%) of mandatory deposits may be applied to settlement as an added source of collateral in the event of a Participant default (PTC Rules, Article V, Rule 2).

As described in the response to question III.A.1, above, the mandatory deposit for a full service Participant is between a minimum of \$1,000,000 and a maximum of \$10,000,000, and for a Limited Purpose Participant is \$50,000. At least \$150,000 of the

mandatory deposit for a full service Participant and the entire deposit of a Limited Purpose Participant must be in cash, The remainder may be in cash or United States government securities with a remaining maturity of one year or less. Optional deposits may be in cash or debt securities guaranteed by the United States government, an agency or instrumentality thereof.

### ***Net Free Equity control***

Net Free Equity (“NFE”) in a Participant’s account measures the value of collateral associated with the account (see response to question VIII.C.1, below) and, if the account has a net debit cash balance, NFE represents the value of the collateral in the account or the associated Transfer Account which PTC can pledge or liquidate in the event the debit balance for that account is not paid.

### ***Net Debit Monitoring Level***

Each Participant is subject to a net debit cap called the Net Debit Monitoring Level (“NDML”) (see response to question VIII.F.1, below) which is designed to limit a potential default to the amount of funds available to PTC for end-of-day settlement, thereby providing sufficient liquidity for system-wide settlement notwithstanding the failure to settle of any single Participant.

### ***Committed Lines of Credit***

PTC maintains committed lines of credit totaling \$2 billion with a consortium of banks to fund end-of-day settlement in the event of a Participant’s failure to make timely payment. Any borrowing under these lines would be secured by the collateral of the defaulting Participant.

### ***Loss Assessment***

If liquidation of the collateral of the defaulting Participant fails to fully cover the outstanding obligation (e.g. decline in market value in excess of the collateral haircut), PTC will assess all Participants which received credits to their cash balances as a result of transactions with the defaulting Participant on the day of default. If any Participant defaults in the payment of a loss assessment, PTC will assess their counterparties in like manner. This process will be repeated until either the loss has been covered in full or there are no more Participants subject to assessment (PTC Rules, Article II, Rule 6, Section 6).

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).*

***Day 1 (day of default)***

4:00 p.m. End processing of transactions versus payment. Participants are notified of final settlement obligation.

4:30 p.m. Participant debit balance payments are due at PTC.

If payment is not received for a debit balance in a Participant account, collateral in the account, or associated Transfer Account, is blocked. Penalty fees are assessed for late payment.

In the event that payment is not received for a debit balance in any Participant account, PTC will take the following actions in the following order (PTC Rules, Article II, Rule 6, Section 1):

4:45 p.m. Penalty fees are increased.

Set off any credit balances in accounts of the Participant on which PTC has a lien against the unpaid debit balance.

Defaulting Participant's collateral is pledged to PTC and/or lending banks under PTC's \$2 billion committed lines of credit.

5:00 p.m. PTC wires credit balance payments to Participants.

If PTC's capital and committed end-of-day credit lines are not sufficient to cover Participant default (e.g. multiple Participant default):

4:45 p.m.+ If defaulting Participants are not insolvent, draw on the required cash deposits to the Participants Fund of other Participants.

Solicit voluntary loans from Participants and outside banks secured by collateral of the defaulting Participants.

Borrow from Participants which delivered to the defaulting Participants, pro rata based on the cash value of deliveries, secured by collateral of the defaulting Participants. Maximum borrowing from any single Participant is its net credit balance.

Borrow pro rata from Participants with remaining net credit balances secured by collateral of the defaulting Participants.

5:00 p.m.+ PTC wires funds to Participants with remaining credit balances.

***Day 2 (business day following day of default)***

10:00 a.m. In the event that a defaulting Participant fails to cure its default, PTC may liquidate the collateral of the defaulting Participant.

***Day 3 (two business days following day of default)***

12:30 p.m. If liquidation of the collateral fails to fully cover the outstanding obligation, PTC will implement its loss assessment procedures (see response to question VI.B.2, above).

4:30 p.m. Participant loss assessment payments are due at PTC as part of end-of-day settlement.

***Day 4 (three business days following day of default)***

8:30 a.m. In the event that a Participant defaults in the payment of a loss assessment, PTC will repeat the loss assessment process prior to the opening of the system for transaction processing.

4. *Please describe all conditions under which provisional transfers of securities or funds could be unwound by the SSS.*

PTC has no conditions under which securities or funds transfers would be unwound.

- (a) *How and on what authority would a decision to unwind securities or funds transfers be made by the SSS?*

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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. Bankruptcy cannot be declared retrospectively in PTC's jurisdiction.

A Participant which becomes insolvent is required to immediately notify PTC. By processing a transaction through PTC, a Participant is deemed to represent and warrant that it is not insolvent (PTC Rules, Article IV, Rule 4, Section 1).

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.*

There are no circumstances in which transfers of securities or funds would be unwound.

- C. *Has a participant in the SSS ever been declared in default or become insolvent?*

Since its inception, PTC has not experienced a Participant default. All loans due to the failure of a Participant to pay a debit balance at end-of-day settlement have been repaid the following day.

Three Participants, Drexel Burnham Lambert, Thompson McKinnon and Nationar experienced solvency crises.

1. *Have loss-sharing procedures been invoked?*

PTC has never been required to implement its loss allocation procedures.

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

In all of the Participant insolvencies noted above, an orderly liquidation of positions ensued and no losses were suffered by PTC, its Participants or its owners.



## 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?*

No. A securities transfer will not be commenced unless there is sufficient available securities in the delivering Participant's account to effect the transfer (PTC Rules, Article II, Rule 13, Section 1(b)(i)(A)).

1. *Under what conditions could such debit positions occur?*

None.

(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.*

Not applicable.

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

Not applicable.

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

Not applicable.

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

PTC's system will prevent the commencement of any securities transfer unless the delivering Participant has sufficient available position in its account.

4. *What procedures would be followed by the SSS in case the debit can not be rectified? (e.g. failure by the 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.*

Not applicable.

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

PTC does not engage in securities lending.

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.*

Not applicable.

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

Not applicable.

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?*

Not applicable.

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 being lent become a principal to the transaction?*

Not applicable.

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?*

Participants may receive and redeliver the same securities on the same day, subject to compliance with the conditions applicable to all securities deliveries: i.e. the account, or the associated Transfer account, must contain sufficient available position, minimum denomination requirements must be met, and the account must have sufficient NFE (PTC Rules, Article II, Rule 13, Section 1(b)).

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

Yes. A Participant attempting to redeliver securities must have sufficient available position in its account or the associated Transfer Account.

- (b) *If the participant has securities on deposit with the SSS that have been received pursuant to a provisional securities transfer?*

Not applicable. Securities transfers are final when credited to the account, or the associated Transfer Account, of the receiving Participant.

- (c) *Before securities have been received either provisionally or finally, but when a matched receipt instruction exists for the same or greater value?*

No. The securities must have been credited to the Participant's account or associated Transfer Account.

*Is such a practice limited to markets where matching is binding?*

Not applicable.

- (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?*

No. The securities must have been credited to the Participant's account or associated Transfer Account.

*Must the provider of the guarantee have itself received the securities through a final transfer?*

Not applicable.

*Please describe how the SSS evaluates such promises and whether they are addressed by the written rules and procedures of the SSS.*

Not applicable.

- (e) *Other? Please specify.*

None.

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 liquidity of the underlying securities.*

Back-to-back transactions are subject to the same controls that are applied to all transactions.

3. *Under what conditions are payment instructions by participants in the SSS under back-to-back transactions settled for same day value?*

All payment instructions (i.e. cash value of securities transactions) processed through PTC, including those associated with a same day redelivery, are settled at end-of-day.

*Can participants use the proceeds of an on-delivery of securities without the need for an extension of credit?*

No. The receiving Participant's account will be debited for the cash value of the securities prior to redelivery.

#### **VIII. Risk control measures**

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

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

PTC's risk management policies and procedures are maintained by the Risk Manager in consultation with senior management. Material modifications are subjected to internal review including legal analysis to certify compliance with PTC's Rules, senior management approval, review by the Credit Committee and/or Risk Management Committee of the Board of Directors, and approval by PTC's Board of Directors.

2. *Is there a risk management policy that addresses the review and approval of new products or services offered by the SSS?*

Yes. All proposed new products or services are subjected to a formal review process including an evaluation of its operational and financial impact, effect on existing products, regulatory issues and risk management requirements.

*At what level of the organisation is risk management approval given for a new product or service?*

New products or services must be approved by the President or Board of Directors.

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

PTC's Risk Manager is elected by the Board of Directors and reports to the President. The Risk Manager is responsible for monitoring the pricing of securities, establishing and reviewing haircuts, monitoring the financial markets, and, in conjunction with senior management, identifying and reviewing systemic risk scenarios.

4. *Does the Board of Directors review risk management policies and procedures?*

Risk management policies and procedures are reviewed by the Risk Management and/or Credit Committees reporting to the Board and approved by the Board of Directors.

*Does the Board have a risk management or audit committee?*

PTC's Board of Directors has:

An Audit Committee (consisting of directors which are not officers of the company) responsible for the review and supervision of all internal audits, and selection of the company's independent certified public accountants;

A Risk Management Committee (consisting of Participant representatives, PTC's Chief Financial Officer and Risk Manager) reports to the Board of Directors and is responsible for formal oversight of all risk related matters; and

A Credit Committee (consisting of Participant representatives, PTC's Chief Financial Officer and Chief Credit Officer) reports to the Board of Directors and is responsible for advising the Board on all credit issues.

- 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?*

2. *What is the scope of the examination?*

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

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

3. *What is the frequency of the audit or examination?*

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

### ***PTC Internal Audit***

PTC's Internal Audit Department reports directly to the Audit Committee of the Board of Directors and administratively to the President.

Examinations are conducted to evaluate the sufficiency of, and compliance with, internal controls including (i) measures to safeguard assets, (ii) the reliability, consistency and integrity of financial and operating information systems (including systems under development), (iii) compliance with Rules, Procedures, policies, plans, standards, laws and regulations that could have a significant impact on operations, and (iv) economy and efficiency in the use of resources.

Internal control over Participant's securities positions and related cash balances is assessed in relation to criteria for effective internal control described in "Internal Control - Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

All major financial, operational and technical processes are examined at least annually.

Audit reports are reviewed by the Audit Committee of the Board of Directors. Reports are not made available to Participants.

### ***Independent Accountants***

PTC has retained Price Waterhouse as its independent accountant.

Price Waterhouse examines PTC's assessment of its internal control over Participant's securities positions and related cash balances. The examination is made in accordance with standards established by the American Institute of Certified Public Accountants, and includes obtaining an understanding of PTC's internal control, and testing and evaluating the design and effectiveness of such internal control.

Price Waterhouse conducts an audit of PTC's financial statements in accordance with generally accepted auditing standards which require the auditor to obtain reasonable assurance that the financial statements are free of material misstatement.

Price Waterhouse audits and examinations are performed annually.

The “Report of Independent Accounts” expressing Price Waterhouse’s opinion regarding management’s assertion of the effectiveness of internal control over Participant’s securities positions and related cash balances and their opinion regarding the financial statements are distributed to all Participants with PTC’s annual report. A detailed report is presented to PTC’s Board of Directors.

### ***Regulatory Examinations***

Examinations are conducted by the Federal Reserve Bank of New York, the New York State Banking Department and the SEC.

Regulatory examinations are based on the guidelines of the respective agency and generally cover safety and soundness as well as a review of data processing systems. Examiners review both internal and external audit reports, and significant PTC policies, procedures and management reports.

Examinations by the Federal Reserve Bank of New York and the New York State Banking Department are performed annually. Examinations by the SEC are conducted periodically.

Examination reports issued by PTC’s regulators are presented to the Board of Directors. These reports are not made available to Participants.

- 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.*

PTC’s NFE control measures the value of collateral associated with each Participant account which PTC can pledge or liquidate in the event that the Participant fails to pay a debit balance in the account. NFE consists of (i) cash balances in the account, (ii) the market value, net of applicable haircuts, of securities in the account or associated Transfer Account, and (iii) a portion of the cash and market value of securities in the Participants Fund, less (iv) reserve-on-gain (intraday profit on securities deliveries).

Every transaction through PTC is tested to ensure that Participants maintain, at all times, sufficient NFE to cover any outstanding debit balance. PTC will not process any transaction which would result in insufficient NFE (i.e. a collateral deficiency) for either the delivering or receiving Participant (PTC Rules, Article II, Rule 9).

2. *How frequently are securities revalued?*

All securities are marked-to-market daily. The market value of securities used in the determination of NFE is based on the bid price of the security as of the close of business on the preceding business day.

3. *What are the sources for securities valuations?*

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

PTC obtains security prices from independent vendors:

Pass-through security prices are obtained from Muller Data Corporation.

Structured product (e.g. REMIC) prices are generated by using the lower of the two prices obtained from Asset Backed Securities Group (“ABSG”) and Merrill Lynch Securities Pricing Service (“MLSPS”).

United States government security (Participant Fund securities) prices are obtained from MLSPS.

(b) *If pricing models are used, please describe how the models are chosen and how the model inputs are obtained.*

REMICs and other structured products require the use of a model to generate and discount the cash flows to arrive at a price. Vendors rely on internally developed and maintained prepayment models or a sampling of broker-dealer estimates to determine the timing of cashflows. They rely on a sampling of broker-dealer spread and yield estimates to arrive at the appropriate yield to use to discount the cashflows which results in the price.

PTC monitors the accuracy of prices received from the vendors by comparison to each other and to transactions settling through PTC. In addition, security prices which do not change from the prior day, do not change consistently with market movements, or change by more than fifty percent of the haircut for that security are reviewed with the vendors.

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

PTC has a lien on securities held in Proprietary and Agency Accounts, but not on securities held in Segregated, Pledgee, Hold-in-Custody or Limited Purpose Accounts (see response to question III.A.1, above) (PTC Rules, Article II, Rule 4).

Securities transferred versus payment are credited intraday to a Transfer Account, associated with the Proprietary, Agency or Pledgee Account of the receiving Participant, wherein the securities are owned by PTC (PTC Rules, Article II, Rule 3, Section 2).



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

Securities held in an Agency Account by a Participant acting as agent for a third party are subject to PTC's lien.

PTC's Rules provide that securities which have been fully paid for by a Participant's customer, or the customer of the party for which the Participant is acting as agent, must be held in a Segregated Account, free of PTC's lien.

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

In the event that a Participant fails to make timely payment of a debit balance for any account at end-of-day settlement, securities in the account or Transfer Account to which the default relates (or in any Proprietary Account of the defaulting Participant), will be used as collateral for loans to finance settlement (see response to question VI.B.3, above).

If the Participant fails to cure its default, PTC may liquidate securities in any account of the defaulting Participant on which it has a lien to satisfy the obligations of the Participant to PTC.

- 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?*

Collateral is held in Participant accounts or Transfer Accounts at PTC or, in the case of United States government securities in the Participants Fund, in PTC's account at the Federal Reserve Bank of New York.

2. *Does the SSS share a collateral system with another SSS or payment system?*

No.

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

Participants may post additional collateral by making optional deposits to the Participants Fund. Optional deposits in cash may be returned on the same day. Optional deposits of securities may be withdrawn on one business day's prior notice (PTC Rules, Article V, Rule 2).

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

All transactions at PTC must be fully collateralized.

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

Transactions are collateralized by eligible securities (see response to question I.C.1(a), above) in the Participant's account or associated Transfer Account. Deposits of cash or securities to the Participants Fund (see response to question VI.B.2, above) provide an additional source of collateral. The securities portion of the mandatory deposit to the Participants Fund must be in United States government securities with a remaining maturity of one year or less, and optional deposits of securities must be debt securities guaranteed by the United States government, an agency or instrumentality thereof.

Haircuts on GNMA single family pass-through and United States government securities are 5%. Other GNMA pass-through securities carry higher margins because of their lower liquidity as follows:

Project loan/note	10%
Construction loan	12%
Mobile home	20%

Structured product haircuts are set at a level which exceeds the percentage price decline which would result given the largest historical change in interest rates over two consecutive business days, as calculated using a model. The minimum allowable haircut for any security is 5%.

6. *How are collateral valuation methodologies developed and reviewed?*

PTC's haircuts are based on the largest historical percentage price decline observed over two consecutive business days. Haircuts for all securities should be set at a level that is adequate to cover the potential exposure of the collateral to adverse price movements and pricing inefficiencies.

Haircuts on structured products are reviewed quarterly and more frequently, if (a) the yield of any benchmark United States government security moves by 100 basis points or more, (b) the one day percentage price decrease exceeds 50% of the related haircut, or (c) there is a change in the risk characteristics of the security.

PTC's Risk Manager is responsible for the establishment and review of haircuts. Haircuts and/or the methodology used to determine haircuts for all products are documented, reviewed by the Risk Management Committee and approved by the Board of Directors.

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

PTC's collateral policies are described in its Rules (Article II, Rules 4 and 9, and Article V, Rule 2) and Procedures. Security haircuts are described in the 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.*

PTC's NDML control is a net debit cap which is designed to limit a potential default by any single Participant to the amount of funds available to PTC for end-of-day settlement. An NDML is established for each Participant equal to PTC's committed credit lines available to finance end-of-day settlement or a lesser amount based upon criteria related to the Participant's capital adequacy, creditworthiness and transaction volume (PTC Rules, Article II, Rule 2, Section 4).

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

PTC's NDML control applies to all Participants.

*What are the exceptions to the limits?*

Subject to PTC approval, a Participant may increase its NDML if the Participant provides an additional committed line of credit on which PTC may freely draw.

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

PTC's NDML control is applied to each Participant individually.

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)?*

Not applicable. All securities deliveries through PTC are final.

5. *Does the SSS automatically reject transactions that exceed limits or is compliance determined ex post?*

PTC will not process any transaction that would increase a Participant's aggregate net debit balance, or a debit balance in any account of the Participant, to a level that would exceed its NDML.

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

PTC's NDML control is designed to comply with the Federal Reserve Payments System Risk Policy which requires private delivery-against-payment systems to "have sufficient safeguards so that it will be able to settle on time if any one of its major participants defaults."

A NDML is established for each Participant by the Board of Directors based on the recommendation of the Credit Committee. PTC's Chief Credit Officer is responsible for preparing the information required to support the Credit Committee recommendations, and for the preparation of a quarterly review of the adequacy of each Participant's NDML.

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

PTC's NDML policies are described in its Rules (Article II, Rule 2, Section 4) and Procedures.

*Where does additional authority to set or amend limit policies reside?*

Amendments to PTC's NDML policies would require a Rule change as described in the response to question II.A.3.(a), 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?*

Both PTC and Participants have access to continuous up-to-date information on cash and securities balances in Participant accounts.

2. *Is there a special risk control regime that the SSS would apply to a participant known to be experiencing financial difficulties?*

Participants that are experiencing financial difficulties are placed on a "watch list" and closely monitored. In addition, PTC's management may reduce the Participant's NDML. Once a Participant's NDML is reduced, it can only be increased with the approval of the Board of Directors.

3. *Does the SSS maintain or administer loss-sharing arrangements other than those applicable to events of default addressed in Section VI above?*

No.

*Are these loss-sharing pools pre-funded by participants?*

Not applicable.

## **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 system used by the SSS?*

- (a) *Whole system overall?*

Uptime performance:

1/95 - 12/95	99.84%	(total downtime = 263 minutes)
1/96 - 12/96	99.82%	(total downtime = 302 minutes)
1/97 - 8/97	99.98%	(total downtime = 18 minutes)

- (b) *Broken down by major components? (e.g. communications network, central processing facility)*

Uptime performance by major component:

		<u>Central Processing Facility</u>	
	<u>Communications Network</u>	<u>Hardware</u>	<u>Software</u>
1/95 - 12/95	100.00%	100.00%	99.84%
1/96 - 12/96	99.98%	100.00%	99.84%
1/97 - 8/97	99.98%	100.00%	100.00%

(c) *During critical processing periods?*

Uptime performance on designated GNMA settlement days:

1/95 - 12/95	100.00%	
1/96 - 12/96	99.21%	(total downtime = 187 minutes)
1/97 - 8/97	100.00%	

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?*

End-of -day settlement was delayed on two occasions due to operational problems during the past two years.

(b) *Please describe the nature of any such problems.*

On November 19, 1996 a file limitation was exceeded resulting in a software failure.

On March 10,1997 an incorrect file was loaded into the Fedwire system.

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

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

PTC maintains a comprehensive contingency plan containing detailed procedures for the recovery of systems and/or business operations under a variety of service disruption scenarios.

2. *Is this plan available for review by participants?*

PTC's contingency plan is reviewed and approved by the Board of Directors annually. The detailed plan, however, is not available to Participants.

3. *How often is this plan tested?*

Operation of PTC's alternate data center and wireroom back-up is tested quarterly by processing actual on-line activity at the alternate site.

*Does this involve participants in the SSS?*

Yes.

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

PTC maintains two independent, geographically separate data processing sites, containing symmetrical computer configurations, located on different power grids. On-site redundancy exists for all critical components and environmental protection systems have been installed at both sites addressing power, fire, water and physical security, including an uninterruptable power supply and diesel motor generators in the event of extended power loss. In addition, space, equipment and supplies are available at the alternate site to support critical business functions including Fedwire access.

Recovery at the alternate site at “point-of-failure” is effected by the use of remote journaling of transaction data from the primary site or, as a secondary backup, from a third site.

Communications access is over a predominantly fiber optic, diversely configured network with the ability to provide for timely recovery and the capacity to redirect traffic to either PTC site as required. In addition, all Participant leased lines are equipped with dial back-up in the event of line failure.

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

PTC’s contingency plan provides for the resumption of processing at the alternate site within three hours, at point-of-failure.

- 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.*

PTC Participant terminal devices are site specific and a PTC account used by one Participant cannot be accessed from another Participant’s site. Participant terminal access occurs over dedicated leased lines. Dial back-up, in the event of leased line failure, is initiated by PTC.

Access to PTC’s processing system requires both an operating system account and password (first level sign-on) and an application system ID and password (second level sign-on). Operating system passwords are encrypted and are subject to rules governing password length and periodic expiration. The application system ID establishes appropriate functional privileges and permits access to only the user’s account. Access is denied after repeated unsuccessful log-in attempts and inactive accounts are disabled.

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

PTC's data security systems and procedures are included in both internal, external and regulatory audits.

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

PTC's regulators consider data processing systems to be an important element in the safety and soundness of clearing agencies.

The SEC, citing the objectives of Section 17A of the Securities Exchange Act of 1934 (under which PTC is registered as a clearing agency), has implemented an Automation Review Policy ("ARP"). ARP requires clearing agencies to "rigorously and regularly evaluate their processes related to the capacity and vulnerabilities of their automated systems." The ARP methodology incorporates (i) capacity planning, (ii) systems development methodologies, (iii) contingency planning and (iv) security assessments.

- D. *Does the SSS impose minimum operational or performance standards on third parties (e.g. communications providers)?*

Vendor contracts contain contractual obligations covering performance standards and/or guaranteed response times, as appropriate.

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

Vendor performance is subject to continuous review. Other than withholding payment or contract termination, no sanctions are provided to cover a vendor's failure to meet performance standards.

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

Losses resulting from operational problems caused by vendors would be borne by the Participant incurring the loss. PTC would not reallocate the loss to other Participants.