

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

**DISCLOSURE FRAMEWORK FOR  
SECURITIES SETTLEMENT SYSTEMS**

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## FOREWORD

The arrangements for settlement of securities transactions and the potential risks associated with these arrangements have been the subject of considerable prior work of both the Committee on Payment and Settlement Systems (CPSS) and the International Organisation of Securities Commissions (IOSCO). This work has consistently emphasised the need for market participants to have a clear understanding of the rights, obligations, and exposures associated with their participation in securities settlement systems.

The present Disclosure Framework for Securities Settlement Systems builds on the earlier work of the CPSS and IOSCO by providing a protocol for the review of a securities settlement system's operation and its allocation of risks. The Disclosure Framework was developed by a Working Group with representatives from the CPSS and IOSCO, as well as private sector and emerging markets settlement system operators. The benefits of a broad, collective approach to developing the Disclosure Framework are underscored by the increasing volume, diversity, and complexity of global securities trading, as well as by the expanding efficiency of and linkages between securities settlement systems.

The Disclosure Framework is intended as a tool for system operators and participants to use in discussing the risks associated with securities settlement arrangements, and does not seek to provide common answers to all practical issues of risk management faced by securities settlement systems. The contribution of the Disclosure Framework will naturally depend on the positive cooperation of settlement system operators in devoting their own resources to its completion. In the view of the CPSS and IOSCO, as well as the system operators represented on the Working Group, the cost of these resources will be far outweighed by the risk management benefits.

Mr. Gilbert and his colleagues are to be congratulated on having completed this important undertaking within tight time constraints. Able assistance in editing and publishing the report was provided by the BIS and IOSCO.

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## Introduction

The Committee on Payment and Settlement Systems of the central banks of the Group of Ten (G-10) countries (CPSS) and the International Organization of Securities Commissions (IOSCO) have demonstrated a shared concern with regard to clearance and settlement practices throughout the world. Both the CPSS and IOSCO believe that common interests in the efficiency and risk management of securities settlement systems can be advanced through collective initiatives. Consequently, in 1996 the CPSS and IOSCO formed a joint working group to develop a disclosure framework for securities settlement systems. The working group consisted of securities settlement system operators, including both official and private sector representatives, securities regulators and central bankers. Both developed and emerging markets were represented in the working group.

The goal of developing a disclosure framework for securities settlement systems (SSSs) builds on important prior work undertaken by the CPSS and IOSCO to identify risks associated with securities settlement. The 1992 CPSS report *Delivery versus Payment in Securities Settlement Systems* (DVP Report) defines and analyses the types and sources of risk associated with settlements between direct participants in a single settlement system. This report also clarifies the meaning of delivery-versus-payment (DVP) mechanisms and describes three common approaches to achieving DVP, each of which entails different risks to market participants.

The *Cross-Border Securities Settlements* report (Cross-Border Report), prepared by the CPSS in 1995, expands on the DVP Report by analysing the channels that market participants use to complete cross-border securities transactions. This report outlines the different risks that may be present in these arrangements, even in those cases where DVP is achieved, including replacement cost risk, liquidity risk, cash deposit risk, custody risk and systemic risk. In particular, the report highlights the fact that custody risk will be present whenever market participants hold their securities through an intermediary, a standard practice for non-residents attempting to settle cross-border transactions.

The Cross-Border Report stresses the importance of understanding the nature of the custody risks, as well as the procedures used to effect back-to-back settlements and cross-system settlements in the cross-border context. The report concludes that the complexity of relationships between the multiple intermediaries associated with cross-border settlements poses challenges to the oversight of domestic markets and settlement systems. It notes that the most basic challenge stems from a lack of transparency in cross-border securities settlement arrangements.

In 1990, IOSCO published a report in which it endorsed and supported the prompt implementation of nine recommendations by the Group of Thirty, such as shortening the time between trade date and settlement and assuring the simultaneous exchange of payment and securities. Successive reports on their implementation have also been prepared (1993, 1994, 1995 and 1996). In 1992, IOSCO published a document entitled *Clearing and Settlement in Emerging Markets — A Blueprint*, to facilitate the development of centralised, automated SSSs.

More recently, IOSCO's 1996 *Report on Cooperation Between Market Authorities and Default Procedures* (IOSCO Report) determines that transparency of market default procedures is important in that it provides certainty and predictability to market participants, facilitates orderly handling in case of an actual default and enables market participants to make an informed assessment about markets.

These reports, as well as other work undertaken by the CPSS and IOSCO, have consistently emphasised the importance of transparency of market mechanisms. At the same time, however, growth in worldwide settlement volumes and greater use of financing transactions have required settlement system operators to develop processes for more rapid exchange of securities and funds and more efficient linkages between systems. Moreover, as prior reports have shown, apparent similarities in the technologies employed and services offered can mask significant differences in

securities settlement arrangements, as well as in the approaches taken to the management of the associated risks.

Therefore, it is critical that participants in the securities markets carefully examine the rules and operating procedures and practices of each system, as well as the governing law, underlying custody arrangements and linkages across systems. While much relevant information of this type is publicly available, it is often contained only in extensive, detailed handbooks of rules and procedures. A number of SSSs do publish informative pamphlets for their participants, but these can take a variety of forms, making it difficult for participants to assess similarities or differences in the risk management approaches used by the different systems.

To assist market participants in identifying important risks associated with their participation in SSSs, the CPSS and IOSCO therefore determined that it would be beneficial to develop jointly a disclosure framework that system operators and participants could use to gain a clearer understanding of the rights, obligations and exposures associated with SSSs. The CPSS and IOSCO welcomed the participation of a number of private sector SSS operators in the development of the disclosure framework.

The framework is intended to be completed by SSS operators for the information and benefit of their direct participants, both current and potential, as well as for indirect participants. It is not intended as an attempt to set prescriptive standards for SSSs, as a replacement for the rules and procedures of the SSS or as a legal representation or binding contract. Moreover, the framework does not necessarily identify all information that the SSS should disclose in the light of its individual facts and circumstances and therefore it may be necessary for participants to discuss issues directly with the SSS to obtain a full understanding of the system. The framework should, however, help market participants and regulators to organise and understand the information that they need in order to appraise the risks, including any systemic risks, potentially associated with SSSs.

While the framework focuses on the risks of direct participation in SSSs, it is clear that many of the same issues arise in connection with the relationships between market participants and local or global custodians. Therefore, while this framework is not intended to cover the specific aspects of these relationships, it may be helpful as a point of reference for those using the services of custodians as well.

The sections below are intended to elicit important information from SSSs in the areas of organisational structure and market context, ownership arrangements, rules and procedures, relationships with participants, links to other SSSs and intermediaries, procedures for funds and securities transfers, default procedures, settlement of back-to-back transactions, risk control measures and operational risks. The disclosure framework is structured in the form of a questionnaire which SSSs would complete. The CPSS and IOSCO encourage SSSs to complete the questionnaire and make their responses available to market participants, regulators and other interested parties. To ensure that the information in their responses to the questionnaire remains accurate, SSSs would also need to review their responses periodically, at least annually, and make appropriate changes if necessary. The questionnaires completed by SSSs would therefore serve to increase the transparency of their operations to the market-place.

## **INSTRUCTIONS FOR COMPLETING THE DISCLOSURE FRAMEWORK**

1. Please answer all the questions. If a question is not applicable, please indicate that this is the case and explain why it is not applicable.
2. Note that in most cases each section consists of a number of headline questions (shown in italics and labelled *A*, *B*, etc.) supplemented by more specific sub-questions. The headline questions are the key questions, so please make sure that each is answered in full. Answering each of the sub-questions may not, in all cases, provide a full answer to the headline question.
3. Please answer the questions in the order presented and restate the questions themselves when providing the answers. If necessary, cross-reference information given elsewhere in the response if this is helpful in avoiding duplication.
4. The glossary accompanying the disclosure framework defines the meaning of terms as used in the questionnaire. Please make sure that the use of terminology in the responses is consistent with these definitions. If a term used in a response is system-specific or used in a way that could be misunderstood, please provide a clear explanation of how the term is used.
5. Some of the questions specifically suggest the use of charts or diagrams to clarify a response. Please feel free to include additional charts or diagrams wherever they would be helpful. All charts and diagrams should be accompanied by a description that enables them to be understood.
6. In cases where multiple responses to a question are possible for example if the SSS offers multiple approaches to settlement processing, please provide a response covering each of the alternatives and indicate the extent to which each alternative response is relevant.
7. Please do not simply refer to or quote rules or regulations as a response to the questions unless this is specifically requested. As a supplement to a response, however, please feel free to indicate where relevant rules or regulations may be found.
8. Where questions ask about the timing of events, please provide responses relative to the local time zone where the SSS is located.
9. Please review responses periodically (at least annually) and update if necessary to ensure that they continue to provide an accurate description of the SSS and its practices. Significant changes to the SSS should also be reflected as soon as possible after they occur. Please date the response so that it will be possible to determine how recently an update has been made.

## **I. Basic information**

This section addresses a number of fundamental features of the SSS, and provides the market context for its operation. The questions establish the basic functions of the SSS, including the securities for which it provides settlement services, as well as whether the SSS offers other services. Questions on the organisational and ownership structure of the SSS elicit information on its legal basis and corporate governance.

A wide variety of organisational structures and business functions are possible for SSSs. For example, systems may be owned by central banks, by their participants or by an independent private sector entity that may or may not be operated for profit. It is helpful to distinguish the type of ownership, the organisational and decision-making structure of the SSS and the financial resources of the SSS, as well as the supervisory oversight to which the system is subject, as a first step in clarifying the respective responsibilities of all relevant parties.

- A. *What is the name of the SSS?*
- B. *Where and in which time zone is the SSS located?*
- C. *What functions does the SSS perform?*
1. Does the SSS serve as a securities depository and/or provide securities settlement services?
    - (a) What types of instrument are eligible for deposit at the SSS (e.g. debt, equities, warrants, etc.)?
    - (b) What types of instrument are eligible for transfer within the SSS?
    - (c) Please describe whether eligible securities are dematerialised, immobilised or transferred physically.
    - (d) Does the SSS provide safekeeping for physical certificates?
  2. Does the SSS provide cash accounts and/or provide funds transfers in conjunction with securities transfers? If so, in what currencies?
  3. Does the SSS provide a trade matching service? Do others provide such services for securities settled at the SSS?
  4. Does the SSS provide a trade netting service (as distinct from undertaking the settlement of securities transfers on a net basis)? Do others provide such services for securities settled at the SSS? In either case, what types of netting (bilateral or multilateral), if any, are performed?
  5. Does the SSS offer a securities lending or borrowing programme?
  6. Does the SSS provide custodial and/or related services such as the collection of interest, dividends, principal or withholding tax reclamations? Which types of service are provided?
  7. Does the SSS act as a central counterparty or principal to transactions with its participants?
  8. Other? Please specify.
- D. *What type of organisation is the SSS?*
1. Please indicate whether the SSS is a public sector or private sector entity.
  2. Please indicate whether the SSS is organised on a for-profit or a non-profit basis.
  3. What is the legal basis for the establishment of the SSS and for securities transfers made through it?
- E. *Please describe and provide a diagram outlining the organisational and ownership structure of the SSS.*
1. Who are the owners of the SSS?
  2. What entity or entities operate the SSS? Which functions of the SSS, if any, are outsourced to third parties?

3. Does the SSS have a Board of Directors?
  - (a) What is its composition?
  - (b) What are its responsibilities?

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

1. Amount of paid-in capital and retained earnings?
2. Guarantees, insurance coverage or other similar arrangements?
3. Credit lines or letters of credit?
4. Powers to assess participants or equity holders?

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

## **II. Rules and procedures of the SSS**

It is important that SSSs have clear rules and procedures governing all major aspects of their operations. If participants have access to these rules and procedures, they will be able to form clear expectations about the actions of the SSS and will be able to use their understanding to make decisions on that basis. This is particularly important with regard to the resolution of failures to settle or other potential disruptions to the operation of the SSS.

The rules and procedures also typically describe the structures and processes for taking decisions that are at the core of any organisation's corporate governance. For SSS operators, the integrity of the decision-making processes and the means for communicating decisions is important to the level of confidence participants have in the system's ability to manage risk fairly and effectively.

The questions below focus broadly on how participants can obtain copies of the SSS's rules and procedures, how participants can provide input to the rules and procedures, how they are notified of changes, the applicability of the rules and procedures to the SSS as well as its participants, and the circumstances under which the rules and procedures can be overridden. Taken together, the questions are intended to provide participants with an understanding of the role that the system's rules and procedures play within the operation 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?*

1. How can participants obtain a copy of the rules and procedures?
2. Does other documentation provided to participants (e.g. user guides) have the same status as the rules and procedures?
3. Describe the process for changing rules and procedures, including any need for regulatory approval.
  - (a) What authority is required, and how does this differ depending on the type of change involved?
  - (b) How are participants notified of changes in rules and procedures?
  - (c) Is there a procedure for participants or others to comment on proposed rule changes?

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

### III. Relationships with participants

In evaluating SSSs, it is essential that participants understand the nature of the relationships that the systems have with their participants. The different types of membership that are available as well as the requirements for admission as a participant should be understood. A knowledge of the account structure of the SSS is also important for an informed evaluation of the system. Participants should understand whether this structure allows or requires the segregation of their customers' cash or securities in separate accounts or sub-accounts at the SSS.

This section addresses these issues as well as the procedures for and consequences of terminating participation in the SSS. Because of loss-sharing or other arrangements, termination of membership may not extinguish all obligations of participants with respect to the SSS. General limitations on SSS liability to participants are the subject of the final question in this section. These questions are obviously important in enabling participants to establish the magnitude of their exposures to different risks associated with the SSS.

Although these questions provide the basic framework of the relationship between participants and the SSS, many of the most important aspects of these relationships concern the resolution of failures to settle or events of default. Specific questions on these topics are discussed in Section VII below.

- A. *Please describe the types of membership offered by the SSS.*
  1. How do the types differ?
  2. Within each membership category, are all participants subject to the same rules and procedures? Please describe important exceptions, including both differences in rules across participants and the rationale for these differences.
- B. *Can participants establish accounts for their customers' assets that are segregated from their own asset accounts at the SSS?*
  1. If so, is this accomplished through a single omnibus customer account or through a multiplicity of accounts and/or sub-accounts?
  2. Is the segregation optional or compulsory?
  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?
- C. *Please describe participant requirements for each type of membership.*
  1. Are participants required to be domiciled or resident in a particular jurisdiction?
  2. Are participants required to be subject to a supervisory regime? If so, please describe.
  3. Are participants required to hold an equity stake in the SSS?
  4. Are there financial, economic, personal or other requirements (e.g. minimum capital requirements, "fit and proper" tests)? If so, please describe.
- D. *Does the SSS engage in oversight of its participants to ensure that their actions are in accordance with its rules and procedures? If so, please describe.*
- E. *Under what conditions can participants terminate their membership in the SSS? Does this mark the end of all liabilities of the participant? If not, please describe what liabilities could remain.*
- F. *Under what conditions can the SSS terminate a participant's membership in the SSS?*
- G. *Please describe the scope of the SSS's liability to participants, including the standard of liability (negligence, gross negligence, wilful misconduct, strict liability or other), the force majeure standard, and any limitation to the scope of liability of the SSS (e.g. indirect or consequential damages). Where are these liabilities and their limitations set out (e.g. in statute or contract)?*

#### **IV. Relationships with other SSSs and commercial intermediaries**

Many SSSs have relationships with intermediaries who perform critical tasks for the SSS and indirectly, therefore, for the system's participants and their customers. In particular, relationships or linkages between SSSs may be important for an understanding of the implications of settlement arrangements. For example, in those instances where the linkage includes using another SSS or a commercial intermediary as a securities sub-custodian, disclosure of information concerning the linkage would be essential for participants to fully evaluate the associated risks. The appraisal of risks may differ depending on whether the linkage allows only free deliveries or whether cash accounts at the two SSSs are also involved. The latter types of linkage deserve particular attention to ascertain whether they increase the potential for settlement disruptions to spread quickly between different systems.

Because it is the SSS and not its participants that negotiates and concludes the agreements with these third parties, it is important for participants to be fully advised on the relevant aspects of the system's various intermediary relationships, including the standards used by the SSS in the selection and monitoring of intermediaries, the functions that the intermediaries perform and any specific risk management mechanisms in place specifically to protect against the risks posed by these relationships. It is also important to identify instances in which the SSS advances funds or securities on behalf of third parties or intermediaries, as these actions can pose risks to the SSS and its participants.

- A. *Does the SSS maintain linkages (including sub-custodian or cash correspondent relationships) or other relationships with other SSSs?*
  1. Please identify each of the other SSSs used and the type of securities transferred via the linkages.
    - (a) What is the name of the other SSS? Where is it located?
    - (b) What securities are eligible for transfer via the linkage to the other SSS?
    - (c) Are transfers of securities made via the linkage to the other SSS limited to only those that are free of payment or are transfers against payment also made via the linkage to the other SSS? If against payment, please describe the timing of the transfers and the corresponding payments.
    - (d) Does the other SSS provide custody services to the SSS and, if so, who bears any credit or custody risks?
- 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.*
- 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.*
- D. *Does the SSS advance funds or securities to or on behalf of other intermediaries such as issuing or paying agents? If so, please identify the circumstances in which such exposure could arise.*
- 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.*

#### **V. Securities transfers, funds transfers and linkages between transfers**

At the heart of the operations of SSSs are the transfers of securities and funds that actually comprise the settlement process. The questions in this section begin by focusing on the process, if any, for matching settlement instructions prior to beginning the settlement process itself. In

some markets, matched settlement instructions are binding, which may impose additional obligations on participants that are important for them to understand.

This section next considers issues raised by the practice of securities registration. Because the laws of different countries vary widely in this regard, this disclosure framework has not been designed to substitute for the legal analysis of the implications of registration, for example the issue of the nature of the title to securities that is transferred in the SSS if the system itself is not also the registrar. The questions are instead focused on the circumstances in which the SSS itself becomes involved in the registration process, as well as the risks that may arise if participants fail while securities are in the process of being re-registered in the buyer's name. In particular, it is important to understand whether the rules and procedures of the SSS would require transactions to be unwound in such an event.

The mechanics of securities and funds transfers are then addressed, including the issue of where cash transfers associated with securities transfers at the SSS take place. These questions also address the circumstances under which the SSS extends credit to participants as an aspect of providing funds transfer capability at the SSS. It is clearly important for participants to understand what types of cash account are offered at the SSS and on whom they take a risk with respect to cash deposits, as well as whether the SSS itself bears credit risk in conjunction with these accounts.

The questions then explore the timing of processing within the SSS, whether the SSS is a DVP system, and what type of DVP model, if any, has been adopted by the SSS. DVP is a mechanism which ensures that final delivery occurs if and only if final payment occurs, which eliminates principal risk and contributes to reductions in liquidity risk.

The issues which arise in the practical implementation of DVP were outlined in the DVP Report referred to in the Introduction, and mainly concern the finality of the securities transfers and the funds transfers which together constitute the DVP settlement. Transfers are final if they are both irrevocable and unconditional. A transfer is irrevocable when the parties to it can no longer revoke their instructions, and it becomes unconditional when there are no longer any circumstances that could cause the SSS to unwind it. If transfers are provisional at the time of processing, even if DVP is achieved, the risk remains that transfers may have to be unwound later if finality cannot be achieved.

If not properly recognised and controlled, this "finality risk" could have systemic effects. Members of SSSs are often provided with immediate availability of securities received, even if the transfer is not final. If these members then sell the securities again, or make them available to custodial clients, and the original transfer is subsequently unwound, additional transfers by the member or the member's clients may also have to be unwound, spreading the impact of the unwind to unrelated parties. It could also ultimately lead to losses to be shared among participants. For these reasons, the questions below attempt to clarify precisely the circumstances under which transfers become final.

The questions also address the provision of settlement guarantees by the SSS. If guarantees exist, it is necessary for participants to understand the events that trigger the guarantee as well as the coverage that is provided by the guarantee, including the liability of the SSS with respect to the guarantee.

- A. *Please discuss whether and how settlement instructions are matched between participants prior to processing by the SSS.*
1. Is matching required for all transactions without exception?
  2. What procedure is used when instructions do not match?
  3. Are matched settlement instructions binding on participants?
    - (a) If so, please describe the consequences of failure by participants to meet obligations (e.g. forced settlement, penalties, short positions).
    - (b) Please describe whether this is a feature of the SSS's rules and procedures or of national law or regulations.

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

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

1. Who is the registrar?
2. Is it normal practice to register the securities in the name of the SSS (or its nominee) or in the name of the beneficial owner? Are there instances in which securities housed within the SSS are registered to neither the SSS (or its nominee) nor the beneficial owner?
3. If the SSS offers custodial services, will it hold securities registered in the name of the beneficial owner?
4. Under what circumstances does the SSS initiate registration of securities in the buyer's name?
5. How long does the registration process typically take? Are participants notified when registration is complete?
6. Can securities be transferred within the SSS before registration in the buyer's name is complete? If so, do the rules and procedures of the SSS provide for an unwind or reversal of such transfers in case of bankruptcy or other events which result in the buyer's name not being entered on the register?

*C. Please describe how securities transfers are processed within the SSS.*

1. Please indicate whether the transfers are processed as debits and credits to members' accounts or via some other method.
2. On a continuous (real-time) basis, or in one or more batches?
3. If continuous, during what hours does the processing occur? If in batches, at what time or times is the processing initiated and completed?
4. Do securities settlements occur daily? Please identify securities for which settlement occurs only on specific days of the week or month.

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

1. Does the SSS maintain cash accounts for its participants? Are these accounts equivalent to deposit accounts at a commercial or central bank or do they serve only as "cash memorandum" accounts?
2. On what entity (SSS or other) does the participant bear cash deposit risk?
3. Under what circumstances does the SSS provide credit extensions or advances of funds to its participants and thereby expose itself to credit risk?
4. How long can such credit extensions last? How long do they typically last?

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

1. Are funds transfers and securities transfers processed within the same system or in different systems? If different, how are they linked?
  - (a) Please describe whether each securities transfer is linked to a specific funds transfer on a trade-by-trade basis or on a net basis or via some other method.
  - (b) Does the SSS "split" large transactions into multiple transactions or require participants to do so?

2. When do securities transfers and funds transfers become final?
    - (a) At what time do securities transfers become final? After what event or events?
    - (b) At what time do funds transfers become final? After what event or events? Does this timing allow for same-day retransfer of funds received in exchange for securities?
    - (c) If final delivery of securities precedes the final transfer of funds, can participants dispose freely of such securities prior to funds finality? If so, what actions will be taken if funds are not received?
    - (d) If final delivery of funds precedes the final transfer of securities, can participants dispose freely of such funds prior to securities finality? If so, what actions will be taken if securities are not received?
    - (e) Does the timing of finality differ depending on the type of security transferred or the currency in which payment is to be made? Please describe.
  3. Please discuss whether participants are notified of securities or funds transfers while they are still provisional, only when they are final, or both.
- F. *Does the SSS itself "guarantee" funds or securities transfers?*
1. Under what circumstances and at what point are transfers guaranteed by the SSS?
  2. What actions does the guarantee obligate the SSS to take?
  3. Please indicate whether the guarantee is a feature of the SSS's rules and procedures or of national law or regulations.

## **VI. Default procedures**

Events of default are among the most difficult and stressful occurrences that market participants and SSSs may experience. The IOSCO Report underscores the need for transparency in the area of default procedures on the grounds that it will provide more certainty in the operation of critical market mechanisms during these stressful events, and thereby reduce the risk that a single default will cause further disruptions.

Because the definition of a default event may differ across systems, the IOSCO Report recommends disclosure with regard to the circumstances in which action may be taken, as well as who may take it, and the scope of the actions that may be taken. In some cases, the term "default" may not be used by the SSS in its rules and procedures or in contracts with its participants. In these instances, SSSs should attempt to spell out for their participants both how they would address the insolvency of a participant and any other circumstances in which they would initiate exceptional measures to fulfil settlement or other obligations to their participants.

In this regard, this section attempts to lay out in one place the available resources of the SSS with respect to meeting obligations in the event of a default or other events that would trigger exceptional measures. It is important for participants to understand what these resources are as well as the order in which they will be accessed. The questions also address the possibility that securities or funds transfers will be unwound by the SSS. Because unwinds are a way to reallocate liquidity pressures and credit losses, it is vital that participants understand all the possible circumstances in which an unwind could occur.

- A. *Please discuss the events or circumstances that would constitute default of a participant under the rules and procedures of the SSS or that would lead the SSS to make use of exceptional settlement arrangements or unwind procedures.*
1. Failure by a participant to meet a test of its solvency under the applicable laws of its jurisdiction?
  2. Failure to make payments or deliveries of securities within the time specified?

3. To the extent that the rules and procedures grant discretion in the determination of the use of default or other exceptional procedures, please discuss where the authority to exercise such discretion resides and the circumstances in which this authority would be used.
- 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?
  2. Would the SSS be expected to continue to meet all its obligations to participants under these circumstances? Please discuss the resources in place to ensure that this would occur (e.g. collateral, participants' fund, insurance, loss-sharing arrangements, etc.).
  3. Please describe and provide a time line indicating the order in which these resources would be used as well as the timing of participant notifications and important deadlines (e.g. when the SSS's obligations to participants would be met, when participants would need to cover their loss-sharing obligations).
  4. Please describe all conditions under which provisional transfers of securities or funds could be unwound by the SSS.
    - (a) How and on what authority would a decision to unwind securities or funds transfers be made by the SSS?
    - (b) When and how would participants be notified of a decision to unwind provisional securities or funds transfers?
    - (c) How long would participants have to cover any debit positions in their own securities or funds accounts resulting from an unwind?
    - (d) In the event of an unwind, would all transfers be unwound or would only a subset of transfers (e.g. only securities purchases or only those of a subset of participants) be unwound?
    - (e) If only a subset of transfers, what procedure would be followed to determine which transfers and in what order?
  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?
  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.
- C. Has a participant in the SSS ever been declared in default or become insolvent?*
1. Have loss-sharing procedures been invoked?
  2. Please describe whether any of these defaults or insolvencies resulted in losses for the SSS or its participants and how they were absorbed.

## **VII. Securities overdrafts, securities lending and back-to-back transactions**

In recent years, SSSs have implemented a variety of approaches aimed at satisfying increasing demands for more rapid securities settlements, particularly in the cross-border context. This section focuses on several related issues that can arise in conjunction with these procedures.

The first set of questions in this section relates to the possibility of debit positions in participants' securities accounts at the SSS. Because such positions indicate instances where participants have been allowed to transfer securities that they do not have on deposit at the SSS, they clearly involve substantial risk that the SSS may not be able to obtain the actual securities and complete all necessary settlements. For this reason, it is vital for participants to understand the conditions, if any, under which such debit positions can arise, and what actions the SSS will take to

rectify them. The questions also address measures that SSSs can take to reduce or prevent such debit positions.

The existence of a securities lending programme at the SSS and the conditions under which securities loans are triggered is another important topic covered by the questions in this section. Participants need to understand both when the SSS will arrange for securities to be lent to them and when securities they hold on deposit at the SSS will be made available for lending to others. The existence and terms of a securities lending programme may also have implications for the SSS's ability to facilitate settlements in a variety of circumstances, particularly for back-to-back transactions.

Back-to-back transactions were a major focus of the Cross-Border Report and involve a pair of transactions that require a counterparty to receive and redeliver the same securities on the same day. They have the major advantage of avoiding unnecessary funding costs by the party buying and onselling the securities.

This practice poses no particular risk when the delivery follows an actual final receipt of the securities, as there is then no risk that this receipt would have to be unwound. Especially in the cross-border context, differences in the timing of settlement cycles or of finality have led to the development of practices whereby SSSs in some circumstances allow on-deliveries under back-to-back transactions before the initial securities receipts are final, in effect extending temporary (often intraday) securities loans. The questions in this section attempt to clarify the circumstances under which this occurs, so that participants can understand the risks entailed by these practices.

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

1. Under what conditions could such debit positions occur?
  - (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.
  - (b) Are these situations covered explicitly by the rules and procedures of the SSS?
2. How long can such debit positions last? How long do they typically last?
3. How are debit positions in securities accounts prevented, rectified or managed?
4. What procedures would be followed by the SSS in case the debit cannot be rectified? (e.g. failure by a participant with a debit balance in a securities account or unavailability of the securities in the market)
  - (a) Application of loss-sharing provisions allocating the loss to participants?
  - (b) Absorption of the loss by the SSS?
  - (c) Other? Please specify.

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

1. Is the process for lending securities automatic? If not, please describe the procedures used by the SSS to determine whether a securities loan will be made.
2. At what point are participants notified that securities are being lent to them in order to complete their settlements?
3. Which securities on deposit at the SSS are eligible for lending? Do participants have the option to make securities available for lending or is it mandatory?
4. Are lent securities identified by the SSS with specific participants as lenders or only with a common pool of securities available for lending? Does the participant whose securities are lent become a principal to the transaction?

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

1. Under what conditions are delivery instructions by participants receiving and redelivering securities on the same day under back-to-back transactions settled for same-day value?
  - (a) Only if the participant has securities on deposit with the SSS that have been received pursuant to a final securities transfer?
  - (b) If the participant has securities on deposit with the SSS that have been received pursuant to a provisional securities transfer?
  - (c) Before securities have been received either provisionally or finally, but when a matched receipt instruction exists for the same or greater value? Is such a practice limited to markets where matching is binding?
  - (d) Before securities have been received either provisionally or finally, but when a third party has promised to deliver to the SSS securities of the same or greater value? Must the provider of the guarantee have itself received the securities through a final transfer? Please describe how the SSS evaluates such promises, and whether they are addressed by the written rules and procedures of the SSS.
  - (e) Other? Please specify.
2. Please describe limits or controls in place with respect to any of the above arrangements for the settlement of back-to-back transactions, including limits on amounts involved or related to the liquidity of the underlying securities.
3. Under what conditions are payment instructions by participants in the SSS under back-to-back transactions settled for same-day value? Can participants use the proceeds of an on-delivery of securities without the need for an extension of credit?

**VIII. Risk control measures**

This section of the disclosure framework is intended to provide a description of the risk management systems employed by the SSS. Sound risk management encompasses a number of aspects, including assessment of risks and senior management and Board of Directors input into the risk management process, particularly with respect to the review of new products and services by the SSS. Internal and external audits as well as supervisory oversight can also play a vital role in ensuring that the risk management approach is sound and implemented with integrity.

A range of different risks can arise in conjunction with the different services that SSSs may provide. For example, in the course of providing settlement services, the SSS may become exposed to credit, custody or liquidity risks if it either explicitly or implicitly extends funds credit or lends securities to participants. In the provision of custody services, the SSS may take on credit risk if it extends funds to or on behalf of third parties. A variety of risk management approaches to these risks are possible, including in particular the use of collateral or limits on risk exposures. The questions also address several other provisions or tools that may be helpful to SSSs in managing or containing the different risks that they face, but are not meant to exhaust all the possible approaches that SSSs may employ.

*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.
2. Is there a risk management policy that addresses the review and approval of new products and services offered by the SSS? At what level of the organisation is risk management approval given for a new product or service?
3. Does the SSS have a risk management function with clear independence from and authority over operational or marketing functions?

4. Does the Board of Directors review risk management policies and procedures? Does the Board have a risk management or audit committee?
- 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 audit or 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?
- 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.
  2. How frequently are securities revalued?
  3. What are the sources for security valuations?
    - (a) What outside price or data sources are used?
    - (b) If pricing models are used, please describe how the models are chosen and how the model inputs are obtained.
- D. Please discuss whether the SSS has a lien on the securities held in or transferred through it.*
1. Does the lien apply only to the securities owned by the participants themselves or does it extend to the securities beneficially owned by customers of participants?
  2. Under what circumstances and in what manner would such a lien allow the SSS to use the securities?
- 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?
  2. Does the SSS share a collateral system with another SSS or payment system?
  3. Can collateral at the SSS be posted and returned on the same day?
  4. What types of transaction at the SSS involve the use of collateral?
  5. What are the policies with regard to the type of collateral used or haircuts required?
  6. How are collateral valuation methodologies developed and reviewed?
  7. To what extent are collateral policies described in the written rules and procedures of the SSS?
- 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.
  2. Do the limits apply to all participants and/or to other SSSs with which the SSS is linked? What are the exceptions to the limits?
  3. Do limits apply to participants individually or in the aggregate or both?
  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)?
  5. Does the SSS automatically reject transactions that exceed limits or is compliance determined ex post?

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

*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?
2. Is there a special risk control regime that the SSS would apply to a participant known to be experiencing financial difficulties?
3. Does the SSS maintain or administer loss-sharing arrangements other than those applicable to events of default and addressed in Section VI above? Are these loss-sharing pools pre-funded by participants?

## **IX. Operational risks**

Operational failures at the SSS could limit participants' ability to access their assets held at the SSS and prevent them from honouring their commitments to others, with potential spillover effects on other payments, clearance, and settlement systems. Furthermore, prolonged problems could reduce or eliminate trading activity with respect to the affected securities, with substantial consequences for market participants.

It is good practice to mitigate operational risks through redundancy and the maintenance of strong internal controls over the operations of the SSS. In the event of an unavoidable problem or natural disaster, the SSS should also have in place a well-rehearsed plan for business continuity that addresses all the business functions and resources that the SSS would need to renew operations.

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

1. What is the percentage uptime of the systems used by the SSS?
  - (a) Whole system overall?
  - (b) Broken down by major components? (e.g. communications network, central processing facility)
  - (c) During critical processing periods?
2. Has the SSS experienced major operational problems during the past two years?
  - (a) Have settlements been delayed, been disrupted or otherwise failed because of operational problems during this period?
  - (b) Please describe the nature of any such problems.

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

1. Does the SSS have a formal plan for business continuity in place?
2. Is this plan available for review by participants?
3. How often is this plan tested? Does this involve participants in the SSS?
4. What are the major elements of the business continuity plan?
5. How long would it take the SSS to resume operations if primary systems become unusable?

*C. What are the key features of the internal controls covering operations and security at the SSS (e.g. change controls or those covering remote access)?*

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

2. Are internal operational and security controls included in the internal and/or external audits of the SSS?
  3. Are internal operational and security controls covered by regulatory requirements applicable to the SSS?
- D. Does the SSS impose minimum operational or performance standards on third parties (e.g. communications providers)?*
1. How does the SSS ensure that such standards are met on a continuing basis and what sanctions are available to the SSS if they are not?
  2. How would the SSS allocate losses incurred due to operational problems caused by third parties?

## GLOSSARY

*The following glossary of terms is not intended to provide legally precise definitions for all relevant jurisdictions. Rather, by clarifying the usual meaning of various terms, it is intended as a tool to help in answering the questions in the disclosure framework and in understanding the responses to those questions.*

**Back-to-back trades:** a pair of transactions that requires a counterparty to receive and redeliver the same securities on the same day. The transactions involved may be outright purchases and sales or collateral transactions (repurchase agreements or securities loans). For example, a securities dealer might buy and sell the same securities for the same settlement date in the course of making markets for customers or it might buy securities for inventory and finance the position through a repurchase agreement.

**Beneficial ownership/interest:** entitlement to receive some or all of the benefits of ownership of a security or financial instrument (e.g. income, voting rights, power to transfer). Beneficial ownership is usually distinguished from "legal ownership" of a security or financial instrument.

**Bilateral netting:** netting between two parties.

**Book-entry system:** an accounting system that permits the electronic transfer of securities without the movement of certificates.

**Bridge:** the "bridge" is the name commonly used for the link between Euroclear and Cedel that permits cross-system settlement of a trade between a participant in one ICSD and a participant in the other ICSD.

**Cash correspondents:** banks (or similar institutions) used by the SSS to make or receive payments.

**Cash deposit risk:** the credit risk associated with the holding of funds with an intermediary for the purpose of settling securities transactions.

**Cash memorandum accounts:** records kept by the SSS of the funds due to be paid to or received by participants in conjunction with their securities settlements; the records are for information purposes only and do not represent legal claims or liabilities between the SSS and its participants.

**Central securities depository (CSD):** an institution for holding securities which enables securities transactions to be processed by means of book entries. Physical securities may be immobilised by the depository or securities may be dematerialised (so that they exist only as electronic records).

**Certificate:** the document which evidences the undertakings of an issuer of a security or financial instrument.

**Chaining:** a method used in certain settlement systems for processing transfers. It involves the manipulation of the order in which transfers are processed to increase the number or value of transfers that may be settled with available securities and funds balances (or available credit lines).

**Clearance:** the term "clearance" has two meanings in the securities markets. It may mean the process of calculating the mutual obligations of market participants, usually on a net basis, for the exchange of securities and money. It may also signify the process of transferring securities on the settlement date, and in this sense the term "clearing system" is sometimes used to refer to securities settlement systems. In this disclosure framework, the term is used only in the first sense.

**Collateral:** an asset or third-party commitment that is accepted by the collateral taker to secure an obligation of the collateral provider vis-à-vis the collateral taker.

**Confirmation:** the process by which a market participant notifies its customers of the details of a trade and allows the customer to positively affirm or question the trade.

**Counterparty:** one party to a trade.

**Credit risk:** the risk that a counterparty will not settle an obligation for full value, either when due or at any time thereafter. Credit risk includes replacement cost risk, principal risk and cash deposit risk.

**Cross-border settlement:** a settlement that takes place in a country other than the country in which one trade counterparty or both are located.

**Custodian:** an entity, often a bank, that safekeeps and administers securities for its customers and that may provide various other services, including clearance and settlement, cash management, foreign exchange and securities lending.

**Custody-only link:** a link between two SSSs which enables transactions in securities held in SSS1 to be settled using SSS2 (rather than SSS1) when the buyer and seller are both participants in SSS2. Custody-only links do not provide for the transfer of funds between SSS1 and SSS2 and cannot be used to settle transactions between a participant in SSS1 and a participant in SSS2.

**Custody risk:** the risk of loss of securities held in custody occasioned by the insolvency, negligence or fraudulent action of the custodian or of a sub-custodian.

**Customer:** a buyer, seller or holder of securities and financial instruments that does not participate directly in a system. A participant's holdings in a system often include securities and financial instruments of which the participant's customers are the beneficial owners.

**Daylight credit (or daylight overdraft, daylight exposure, intraday credit):** credit extended for a period of less than one business day; in a credit transfer system with end-of-day final settlement, daylight credit is tacitly extended by a receiving participant which accepts and acts on a payment order, even though it will not receive final funds until the end of the business day.

**Debit balance:** see net debit position.

**Default:** failure to complete a funds or securities transfer according to its terms for reasons that are not technical or temporary, usually as a result of bankruptcy. Default is usually distinguished from a "failed transaction".

**Delivery:** final transfer of a security or financial instrument.

**Delivery versus payment:** a link between a securities transfer system and a funds transfer system that ensures that delivery occurs if, and only if, payment occurs.

**Dematerialisation:** the elimination of physical certificates or documents of title which represent ownership of securities so that securities exist only as accounting records.

**Depository receipt:** an instrument issued in one country that establishes an entitlement to a security held in custody in another country.

**Domestic settlement:** a settlement that takes place in the country in which both counterparties to the trade are located.

**Domestic trade:** a trade between counterparties located in the same country.

**Failed transaction:** a securities transaction that does not settle on the contractual settlement date, usually because of technical or temporary difficulties.

**Finality risk:** the risk that a provisional transfer of funds or securities will be rescinded.

**Final transfer:** an irrevocable and unconditional transfer which effects a discharge of the obligation to make the transfer. The terms "delivery" and "payment" are each defined as a final transfer. See provisional transfer.

**Forced settlement:** securities or funds settlement that is either mandated or enforced by the actions of a third party.

**Global custodian:** a custodian that provides its customers with custody services in respect of securities traded and settled not only in the country in which the custodian is located but also in numerous other countries throughout the world.

**Gridlock:** a situation that can arise in a funds or securities transfer system in which the failure of some transfer instructions to be executed (because the necessary funds or securities balances are unavailable) prevents other instructions from being executed, with the cumulative result that a substantial number of transfers fail to be executed on the scheduled date.

**Gross settlement system:** a transfer system in which the settlement of funds or securities transfer instructions occurs individually (on an instruction-by-instruction basis).

**Haircut:** the difference between the market value of a security and its collateral value. The haircut is intended to protect a lender of funds or securities from losses owing to declines in collateral values.

**Immobilisation:** placement of certificated securities and financial instruments in a central securities depository to facilitate book-entry transfers.

**Internal settlement:** a settlement that is effected through transfers of securities and funds on the books of a single intermediary. An internal settlement requires both counterparties to maintain their securities and funds accounts with the same intermediary.

**International central securities depository (ICSD):** a central securities depository that settles trades in international securities and in various domestic securities, usually through direct or indirect (through local agents) links to local CSDs.

**Irrevocable transfer:** a transfer which cannot be revoked by the transferor.

**Issuer:** the entity that is obligated on a security or financial instrument.

**Issuing agent:** an institution that acts on behalf of the issuer of securities in distributing the securities and in realising the proceeds thereof for the benefit of the issuer.

**Legal ownership:** recognition in law as the owner of a security or financial instrument.

**Legal risk:** the risk of loss because of the unexpected application of a law or regulation or because a contract or other right cannot be enforced.

**Liquidity risk:** the risk that a counterparty will not settle an obligation for full value when due, but on some unspecified date thereafter.

**Local agent:** a custodian that provides custody services for securities traded and settled in the country in which it is located to trade counterparties and settlement intermediaries located in other countries (non-residents).

**Local custodian:** a custodian that provides custody services for securities traded and settled in the country in which the custodian is located. See global custodian.

**Loss-sharing agreement:** an agreement among participants in a clearing or settlement system regarding the allocation of any losses arising from the default of a participant in the system or of the system itself.

**Loss-sharing pools:** cash, securities or possibly other assets that are provided by the participants in advance and are held by the system to ensure that commitments arising from loss-sharing agreements can be met.

**Marking to market:** the practice of revaluing securities and financial instruments using current market prices. In some cases unsettled contracts to purchase and sell securities are marked to market and the counterparty with an as yet unrealised loss on the contract is required to transfer funds or securities equal to the value of the loss to the other counterparty. See variation margin.

**Matching (or comparison, checking):** the process for comparing the trade or settlement details provided by counterparties to ensure that they agree with respect to the terms of the transaction. Settlement instructions that have been successfully matched between counterparties are referred to as matched settlement instructions. In some securities settlement systems, penalties may apply to participants that unilaterally revoke matched settlement instructions. In other systems, unilateral revocation of matched settlement instructions may not be possible.

**Member:** in this disclosure framework, the term is used synonymously with participant. See participant.

**Multilateral netting:** netting among more than two parties.

**Net credit or net debit position:** a participant's net credit or net debit position in funds or in a particular security is the sum of all the transfers it has received up to a particular time less the transfers it has sent; if this sum is positive, the participant is in a net credit position, if the sum is negative, it is in a net debit position. The net credit or net debit position at settlement time is called the net settlement position. These positions may be calculated on a bilateral or multilateral basis.

**Net settlement:** a settlement in which a number of transactions between or among counterparties are settled on a net basis.

**Netting:** an agreed offsetting of mutual positions or obligations by trading partners or participants in a system. The netting reduces a large number of individual positions or obligations to a smaller number of positions. Netting may take several forms which have varying degrees of legal enforceability in the event of default of one of the parties.

**Nominee:** a person or entity named by another to act on his behalf. A nominee is commonly used in a securities transaction to obtain registration and legal ownership of a security.

**Obligation:** a duty imposed by contract or law. It is also used to describe a security or financial instrument, such as a bond or promissory note, which contains the issuer's undertaking to pay the owner.

**Omnibus customer account:** an account in which the securities held by a participant on behalf of all (or at least several) of its customers are kept. See also proprietary account, segregation.

**Participant:** a party which participates in a system. This generic term refers to an institution which is identified by the system and is allowed to send transfer instructions directly to the system or which is directly bound by the rules governing that system.

**Paying agent:** an institution that, acting on behalf of an issuer, makes payments to holders of securities (e.g. payments of interest or principal).

**Payment:** the satisfaction and discharge of a monetary obligation by the debtor's final transfer of a claim on a party agreed to by the creditor. Typically, the party is a central bank or a commercial bank.

**Position netting:** the netting of instructions in respect of obligations between two or more parties which neither satisfies nor discharges those original obligations. (Also referred to as payment netting in the case of payment instructions.)

**Pre-matching process:** process for comparison of trade or settlement information between counterparties that occurs before other matching or comparison procedures. Generally, pre-matching does not bind counterparties as matching can do.

**Principal risk:** the risk that the seller of a security delivers a security but does not receive payment or that the buyer of a security makes payment but does not receive delivery. In this event, the full principal value of the securities or funds transferred is at risk.

**Proprietary account:** an account in which a participant holds only those securities it is holding on its own behalf (as opposed to those securities it is holding on behalf of its customers). See also omnibus customer account, segregation.

**Provisional transfer:** a conditional transfer in which one or more parties retain the right by law or agreement to rescind the transfer.

**Real time:** the processing of instructions on an individual basis at the time they are received rather than at some later time.

**Registration:** the listing of ownership of securities in the records of the issuer. This task is often performed by an official registrar/transfer agent.

**Replacement cost risk:** the risk that a counterparty to an outstanding transaction for completion at a future date will fail to perform on the settlement date. This failure may leave the solvent party with an unhedged or open market position or deny the solvent party unrealised gains on the position. The resulting exposure is the cost of replacing, at current market prices, the original transaction.

**Repurchase agreement (repo):** a contract to sell and subsequently repurchase securities at a specified date and price. Also known as an RP or buyback agreement.

**Rolling settlement:** a situation in which settlement of securities transactions takes place each day, the settlement of an individual transaction taking place a given number of days after the deal has been struck. This is in contrast to a situation in which settlement takes place only on certain days - for example, once a week or once a month - and the settlement of an individual transaction takes place on the next settlement day (or sometimes the next but one settlement day) following the day the deal is struck.

**Same-day funds:** money balances that the recipient has a right to transfer or withdraw from an account on the day of receipt.

**Securities borrowing and lending programme:** a facility whereby a loan of securities is made to facilitate timely fulfilment of settlement obligations.

**Securities depository:** see central securities depository (CSD).

**Securities settlement system (SSS):** a system in which the settlement of securities takes place. Often the SSS is a CSD.

**Segregation:** optional or compulsory separation of the securities held by a participant on its own behalf from those held on behalf of its customers. See also omnibus customer account, proprietary account.

**Self-collateralising:** an arrangement whereby securities being transferred can be used as collateral to secure risks involved in the transfer process.

**Settlement:** the completion of a transaction, wherein the seller transfers securities or financial instruments to the buyer and the buyer transfers money to the seller.

**Settlement date:** the date on which the parties to a securities transaction agree that settlement is to take place. The intended date is sometimes referred to as the contractual settlement date.

**Settlement interval:** the amount of time that elapses between the trade date (T) and the settlement date (S). Typically measured relative to the trade date, e.g. if three days elapse, the settlement interval is T+3.

**Settlement risk:** general term used to designate the risk that settlement in a transfer system will not take place as expected. This risk may comprise both credit and liquidity risk.

**Sub-custodian:** where one custodian (e.g. a global custodian) holds its securities through another custodian (e.g. a local custodian), the latter is known as a sub-custodian.

**Substitution:** the process of amending a contract between two parties so that a third party is interposed as an intermediary creditor/debtor between the two parties and the original contract between the two parties is satisfied and discharged.

**Systemic risk:** the risk that the inability of one institution to meet its obligations when due will cause other institutions to be unable to meet their obligations when due.

**Trade date:** the date on which a trade/bargain is executed.

**Trade-for-trade (gross) settlement:** a settlement in which a number of transactions between counterparties are settled individually.

**Trade matching:** see matching.

**Trade netting:** a legally enforceable consolidation and offsetting of individual trades into net amounts of securities and money due between trading partners or among members of a clearing system. A netting of trades which is not legally enforceable is a position netting.

**Transfer:** an act which transmits or creates an interest in a security, a financial instrument or money.

**Unwind:** a procedure followed in certain clearing and settlement systems in which transfers of securities and funds are settled on a net basis, at the end of the processing cycle, with all transfers provisional until all participants have discharged their settlement obligations. If a participant fails to settle, some or all of the provisional transfers involving that participant are deleted from the system and the settlement obligations from the remaining transfers are then recalculated. Such a procedure has the effect of allocating liquidity pressures and losses from the failure to settle to the counterparties

of the participant that fails to settle. Unwinds can be distinguished from debits to securities accounts that do not imply the original transfer is rescinded (e.g. in cases where securities are discovered to be forged or stolen).

**Variation margin:** the amount which is paid by a counterparty to reduce replacement cost exposures resulting from changes in market prices, following the revaluation of securities or financial instruments that are the subject of unsettled trades.

**Zero-hour rule:** a provision in the insolvency law of some countries whereby a bankruptcy or similar procedure declared by a court during the day is considered to have been declared at 0.00 a.m. of the same day. This generally has the effect of retroactively rendering ineffective all transactions of the closed institution that have taken place after 0.00 a.m. on that date.



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