Statement of Guidance

Foreign Exchange Risk Management

1. Statement of Objectives

To provide a standard of best practice to banks for the implementation of an effective and sound Foreign Exchange Risk Management System.

2. Introduction

Foreign exchange risk is the exposure of a company's financial strength to the potential impact of movements in foreign exchange rates. The risk is that adverse fluctuations in exchange rates may result in a reduction in measures of financial strength.

It is acknowledged that specific foreign exchange risk practices may differ among banks depending upon factors such as the institution's size, and the nature and complexity of its activities. However, a comprehensive foreign exchange risk programme should deal with, at a minimum, good management information systems, contingency planning and other managerial and analytical techniques.

3. General

3.1. Board of Directors and Senior Management Oversight

3.1.1 A Board of Directors should:

a) approve a policy on foreign exchange risk;

b) review, at least once a year, the policy, techniques, procedures, and information systems referred to in that policy;

c) ensure adherence to the policy techniques, procedures and informational systems referred to in that policy;

d) ensure that qualified and competent persons i.e. senior management, are employed to manage and control the bank's exposure to foreign exchange; and

e) direct senior management to submit a comprehensive written report to the board of directors of the bank on the management of exposure to foreign exchange risk at least once a year, and to submit such other reports at such intervals as the board may require.

3.2. Strategy, Monitoring and Control

3.2.1 A bank should establish a written policy on foreign exchange risk that:

a) includes a statement of principles and objectives governing the extent to which a bank is willing to assume foreign exchange risk;

b) establishes prudent limits on a bank's exposure to foreign exchange risk; and

c) clearly defines the levels of personnel who have the authority to trade in foreign exchange.

d) Clearly identifies the different currencies, which have been approved for transaction within the company.

3.2.2 A bank should also develop and implement techniques that accurately and continually measure its exposure to foreign exchange risk and its foreign exchange gains and losses. This would include the development and implementation of procedures and information systems that will ensure adherence to the aforementioned policy.

3.2.3 Internal audit

a) Banks should have in place adequate internal audit coverage of the foreign exchange and the settlement process to ensure that operating procedures are adequate to minimise risk. A bank's board of directors – either directly or through its audit committee – should ensure that the scope and frequency of the foreign exchange internal audit programme is appropriate to the risks involved.

b) The board of directors or its audit committee should ensure that audit reports are distributed to appropriate levels of management for information and so that timely corrective action can be taken. Management should detail, in writing, the action taken. The board of directors or its audit committee should regularly review this and consider any outstanding issues. Where appropriate it should ensure that a follow-up audit is undertaken.

c) When audit findings identify areas for improvement in the foreign exchange or settlement area, other areas of the bank on which this may have an impact should be notified. This could include credit risk management, reconciliations/accounting, systems development, and management information systems. In automated settlement processing, the internal audit department should have some level of specialisation in information technology auditing, especially if the bank maintains its own computer facility.

4. Foreign Exchange Settlement Risk

When dealing with foreign exchange transactions the issue of settlement risk often arises. Foreign Exchange Settlement risk is the risk of loss when a bank in a foreign exchange transaction pays the currency it sold but does not receive the currency it bought. Settlement risk exists for any traded product, but the size of the foreign exchange market makes foreign exchange transactions the greatest source of settlement risk for many market participants. In light of the aforementioned, a bank should have systems that provide appropriate and realistic estimates of foreign exchange exposures on a timely basis. These systems would include policies and procedures similar to those mentioned in the previous section with emphasis on understanding settlement risk and formulating a clear and firm plan on its management.

The following sections address topics relating to both Foreign Exchange and its relationship with Settlement Risk.

4.1. Senior management responsibilities

4.1.1 A bank's procedures for managing its foreign exchange settlement risks should be commensurate with the range and scope of its activities. However, in all cases and regardless of the settlement method used, foreign exchange settlement risk management should begin at the highest levels of the organisation, with a policy on foreign exchange settlement risk from the bank's board of directors.

4.1.2 This policy should be an integral and consistent part of the bank's overall policy towards counter-party risk. It should be regularly reviewed and, where necessary, modified to take account of new circumstances such as changes in the scale or nature of the bank's foreign exchange operations or in the method of settlement used.

4.1.3 Senior management should exercise appropriate oversight of settlement exposures. Although specific organisational approaches may vary across banks, foreign exchange settlement risk management should be integrated into the overall risk management process. Managing foreign exchange settlement risk involves many different functional areas of a bank, including trading, credit, operations, legal, risk assessment, branch management, and correspondent relations. In larger, more complex banks, counter-party exposures may also run across departments, branches and legal entities, and may encompass multiple product lines, such as lending and foreign exchange trading.

4.1.4 Banks should have clear procedures for measuring and managing exposures that provide for the efficient aggregation of all components of credit risk toward a counter-party. This is a prerequisite for the proper functioning of the overall risk management process. Only senior management can effect the co-ordination necessary to achieve this. Management information systems should also support the integration of the necessary information.

4.1.5 Accordingly, senior management should ensure that they fully understand the foreign exchange settlement risks incurred by the bank and should clearly define lines of authority and responsibility for managing these risks. Adequate training should be provided to all staff responsible for the various aspects of foreign exchange settlement risk. Senior management and staff should understand that counter-party default is not so rare as to obviate the need for strong risk management. While defaults by major banks are uncommon, the extremely large foreign exchange trading exposures, including those that can last for several days, merit more prudent risk management than is currently found in many banks.

4.2. Duration of foreign exchange settlement exposure

4.2.1 Foreign Exchange-related payments generally are made in two primary steps: the sending of payment orders and the actual transmission of funds. It is important to distinguish between these two steps: the first is an instruction to make a payment, while the second involves an exchange of credits and debits across correspondent accounts and the accounts of the central bank of the currency involved. The first step is normally effected one or two days before settlement date (although there are some variations according to currency and institution) while the second stage takes place on the settlement date itself.

4.2.2 A bank's foreign exchange settlement exposure runs from the time that its payment order for the currency sold can no longer be recalled or cancelled with certainty – the unilateral payment cancellation deadline – and lasts until the time that the currency purchased is received with finality. Note that this is the duration of the exposure. It says nothing about the probability of failure and thus the degree of risk faced by the bank during the period. Depending on the information available to the bank about the creditworthiness of the counter-party or the status of the funds it is due to receive, its assessment of the probability of failure and thus the degree of risk may change during the time the exposure is outstanding. This is, of course, normal for any credit exposure.

4.2.3 To measure and manage their foreign exchange exposures, banks need to be certain of the unilateral cancellation deadline for each currency. It might be expected that banks could cancel payment orders up until the moment before the funds are finally paid to a counter-party. However, correspondent and payment system practices, as well as operational and even legal arrangements, typically result in payment orders becoming effectively irrevocable significantly before the time of payment.

4.2.4 A key factor in determining the unilateral cancellation deadline is the latest time a correspondent can guarantee to satisfy a cancellation request. The documentation covering a correspondent's service agreement should identify this cancellation cut-off time. This documentation is particularly important because, in the event the bank wishes to cancel its payment instruction, the bank and its correspondent are likely to rely upon the terms and conditions stipulated in the agreement. However, in some cases banks may have no written agreement at all with their correspondent or the agreement may not specify a guaranteed cut-off time. Where this is the case, banks should negotiate with their correspondent; this may require a change in nature of the relationship between the bank and its correspondent, recognising that the two need to work together to manage risks effectively.

4.2.5 In assessing their unilateral payment cancellation deadlines, banks should be able to demonstrate that they can in practice identify and hold particular payments up to the cut-off times guaranteed by their correspondents, as internal processes and other practical factors may limit their ability to do so. In many cases, the effective unilateral payment cancellation deadline will be earlier than the guaranteed cut-off time - indeed, in some cases the unilateral payment cancellation deadline may even be earlier than the time the payment order is normally sent to the correspondent. These earlier times could occur, for example, if payment orders were normally processed automatically but cancelling an order required time-consuming manual intervention. Moreover, due to automated processing, a bank may not be able to stop one payment instruction without ceasing or disrupting all outgoing payment instructions. Because a bank's management is unlikely to want to suspend payments to their solvent counter-parties (and face subsequent demands for compensation), an all or nothing capability to cease outgoing payment instructions should not be accepted as the ability to effect unilateral cancellation of payments to a single counter-party. Finally, some deadlines quoted by correspondents may fall outside normal working hours, in which case the bank may need additional time to meet the deadline. Because of these and other factors, banks should consider testing their procedures with their branches and correspondents in simulations of emergencies in order to help determine the effective unilateral payment cancellation deadline.

4.3. Measurement of Foreign Exchange settlement exposures

4.3.1 The actual duration of foreign exchange settlement exposure – namely, the interval from the unilateral payment cancellation deadline for the sold currency until final receipt of the bought currency – is generally referred to as the period of irrevocability. When trades are settled gross, the full face value of the trade is at risk during this period, which can last overnight and up to two or three full days. If weekends and holidays are included, the period of irrevocability – and consequent exposure – can exist for several more days.

4.3.2 A bank's minimum foreign exchange settlement exposure at a specified time includes the value of all outstanding trades where payment is irrevocable; it also includes any known failed receipts since, by definition, the fact the trade has failed to settle means the funds have not yet been received. Because the irrevocable period can last several days, this minimum measure of exposure may be equal to several days' worth of trades. In this situation, a bank might find itself in the position of paying a counter-party on one day when it had not been paid on the previous day(s).

4.3.3 A bank's measurement of its exposure also needs to take account of the process of reconciling incoming payments with expected receipts. The actual exposure of the bank ends when the bought currency is received with finality. However, in the interval between expected receipt and reconciliation, referred to as the period of uncertainty, the bank does not know whether it has received payments from particular counter-parties and will therefore be acting in ignorance of any failed receipts. When measuring its exposure, a prudent bank will therefore assume that during this uncertain period the funds have not been received. Consequently, the maximum settlement exposure at a specified time equals the minimum exposure plus the value of all uncertain receipts at that time.

4.3.4 Note that the period of uncertainty only ends when a bank has positively confirmed that the funds have been received. Positive confirmation means that a bank not only has received information from its correspondents about the payments credited to its nostro accounts but also has processed that information to determine which trades have successfully settled and which, if any, have failed. It is not enough for banks to measure their exposure on the basis that provided they have no news of the counter-party having defaulted, it is safe for them to assume that the funds either have been or will be received. Until the receipt of the funds has been positively confirmed, there always remains the possibility that in fact they have not been received and that the counter-party will default.

4.3.5 Measuring FX settlement exposures requires a bank to identify explicitly both the unilateral payment cancellation deadlines and the reconciliation process times involved in each type of currency transaction. An exact measure of FX exposures has to recognise that the duration of exposures varies by currency pair and that a bank's exposures are likely to change during the day. Exact measurement has the advantage of avoiding overestimation as well as underestimation. Nevertheless, the process involved is relatively complex and so, for operational and system reasons, most banks do not measure their exposures exactly. Instead various estimation methods are used. In particular, many banks define and measure their daily settlement exposures as the total receipts coming due on settlement day.

4.3.6 Estimation techniques can be appropriate – but only if they do not significantly underestimate exposures. However, in practice simple estimation techniques frequently do understate settlement exposures. One problem is that even where exposures last for less than 24 hours, this period may overlap more than one calendar day. For example, the period may start during the evening of the day before settlement and run until late afternoon of the settlement day; in this case, estimating the daily exposure as the receipts due on the settlement day could underestimate the actual exposure late in the day. Moreover, as noted in paragraph 4.3.2 above, exposures often last more than one day. Simple approximation methods for improving this technique, such as using multiples of daily trades, may not sufficiently account for variations in the value of daily trades.

4.3.7 Where estimation techniques are used, management should therefore be able to demonstrate clearly how settlement exposure is measured, and that, even in abnormal circumstances, the estimation techniques will not significantly underestimate the exposure. Even estimation techniques require a bank to have a thorough understanding of both the unilateral payment cancellation deadlines and the reconciliation process times involved in each type of currency transaction.

4.3.8 Finally, it is critical that banks' measurements of FX settlement exposures and associated risks are integrated into their overall risk measurement and management processes. In particular, banks have increasingly adopted consolidated risk measurement and capital allocation methodologies, a trend that CIMA supports. Where such methodologies are used, appropriate measures of FX settlement risk should be included so that internal capital allocations properly reflect the risks associated with this activity.

4.4. Setting and using limits

4.4.1 Banks should ensure that settlement exposures to counter-parties are subject to prudent limits. FX settlement exposures should be subject to an adequate credit control process, including credit evaluation and review and determination of the maximum exposure the bank is willing to take with a particular counter-party. Through this process, an FX settlement limit should be established for each counter-party. The FX settlement exposure limit should be subject to the same procedures used to devise limits on other exposures of similar duration and size to the same counter-party. For example, in cases where the FX settlement exposure to a counter-party lasts overnight, the limit might be assessed in relation to the bank's willingness to lend funds to its counter-party on an overnight basis. Limits should be based on the level of credit risk that is prudent and should not be set at an arbitrary, high level just to facilitate trading with a counter-party.

4.4.2 The limits applied by a bank to its FX settlement exposures should be binding – i.e. FX deals should not be struck that would cause counter-party limits to be exceeded. Any planned excesses should be subject to approval by the appropriate credit management personnel in advance of the excess occurring. However, unplanned excesses may sometimes occur. This may be because, when the deal is struck, the headroom apparently available under a limit has not yet been reduced to reflect other deals recently struck. Or it may be because, when the time comes for the deal to be settled, unexpected events (such as the failure of other transactions to settle) cause exposures to be higher than planned. Banks should take steps to minimise these possibilities. Exposure measures should be updated promptly when new deals are struck or when events (such as fails) mean that the exposures from existing trades last longer than expected. Effective monitoring is crucial to the management of FX settlement risk, and banks with large exposures should have systems that enable them to monitor developments in real-time (or close to real-time) in order to ensure that these exposures do not exceed settlement limits. A bank may want to put additional emphasis on those exposures that are particularly large or are with less-creditworthy counter-parties or where there has been a series of fails that may indicate an underlying credit-worthiness problem. However, if, despite these precautions, unauthorised excesses do still occur, a review by the credit management personnel should take place shortly thereafter so that any necessary corrective action can be taken.

4.5. Procedures for managing fails and other problems

4.5.1 Operational errors are the most common source of fails. While such mistakes may be inadvertent and corrected within a reasonable time, they may in some cases be indicative of more fundamental problems, including credit problems, and so banks should have procedures for quickly identifying fails and taking appropriate action. Such action should normally involve informing the credit department, so that a judgement can be made about the seriousness of the problem. Because a fail represents continued exposure to the counter-party for the full principal value of the trade, banks should include fails in their measures of current and expected exposure (as noted in paragraph 18 above). Banks may also need to take steps to obtain the funds due and to try to avoid recurrences.

4.5.2 When reacting to a fail or to another potential problem with the settlement of an FX deal, banks need to strike a balanced approach. If there appears to be an underlying credit-worthiness problem, the bank may decide that it is prudent to reduce its limit for that counter-party. In more extreme cases, it may decide that, to protect itself from settlement risk, it needs to suspend issuing payment instructions for outstanding deals with that counter-party or to cancel existing payment instructions (if possible). However, failure to pay could have serious consequences; it could constitute a breach of contract by the bank and may cause liquidity problems for the counter-party. Such action should thus only be taken when, after a careful but prompt review of the circumstances, the bank's senior management judges that the situation warrants it.

4.6. Contingency planning

4.6.1 Contingency planning and stress testing should be an integral part of the FX settlement risk management process. Contingency plans should be established to include a broad spectrum of stress events, ranging from internal operational difficulties to individual counter-party failures to broad market related events. Adequate contingency planning in the FX settlement risk area includes ensuring timely access to key information, such as payments made, received or in process, and developing procedures for obtaining information and support from correspondent institutions. An institution should also have a contingency plan in place to ensure continuity of its FX settlement operations if its main production site becomes unusable. This plan should be documented and supported by contracts with outside vendors, where such vendors provide services to the bank that are necessary either to the bank's normal FX settlement or to its contingency plans. Because in many cases the action taken will be similar, contingency planning for FX settlement problems should be co-ordinated with the planning for other problems (such as payment system or trading room failures). Contingency plans should be tested periodically.

4.7. Improving the management of FX settlement exposures

4.7.1 Banks should actively manage their exposures. There are various steps banks can take to reduce the duration or size of the settlement exposures relating to their FX deals. The duration of exposures can be reduced by improving unilateral payment cancellation deadlines by, for example, negotiating better cancellation cut-off times with correspondents and improving internal processing. It is important to note that banks should not simply regularly delay sending payment instructions to their correspondents as a way of improving their periods of irrevocability. Doing so without the correspondents' consent could increase the correspondents' operational risks and thus the risk that payment instructions are incorrectly processed. Instead, banks should seek to negotiate explicit cancellation cut-off times with their correspondents. Banks need to have realistic expectations of what correspondent banks can be expected to achieve, since later cancellation cut-off times have operational and liquidity consequences for the correspondent. Banks also need to be aware of the possible liquidity risk in payment systems if late cut-off times cause FX-related payments to be concentrated towards the end of the settlement day, adversely affecting system liquidity.

4.7.2 Better management of exposures can also be achieved by identifying receipts sooner, thereby bringing the maximum measure of exposure close to the minimum. To reduce the amount of time it takes to identify final or failed receipts, banks will need to consider improving both arrangements for receipt of information from correspondents and the time they conduct their own reconciliations.

4.7.3 Appropriately managed collateral arrangements and legally sound netting agreements (see below) are also important risk management tools that can reduce the amount of a bank's exposure to a particular counter-party for a particular level of trading.

4.8. Use of bilateral netting

4.8.1 Banks can reduce the size of their counter-party exposures by entering into legally binding agreements to net settlement payments bilaterally. Legally binding payment netting arrangements permit banks to offset trades against each other so that only the net amount in each currency is paid or received by each institution. Such payment netting arrangements are contemplated in the industry standard bilateral master agreements covering foreign exchange transactions.

4.8.2 Depending on trading patterns, bilateral payment netting can significantly reduce the value of currencies settled. It also reduces the number of payments to one per currency either to or from each counter-party. Bilateral payment netting is most valuable when the counter-parties have a considerable two-way flow of business; as a consequence it may only be attractive to the most active banks. To take advantage of risk reducing opportunities, banks should be encouraged to establish procedures for identifying payment netting opportunities.

4.8.3 Use of bilateral payment netting requires some modification to the method of measuring settlement exposures explained earlier. When bilateral payment netting is used, all the transactions with a particular counter-party due to settle on that day have to be considered together: the bank will make a single payment to the counter-party in each of the currencies where it has a net debit position, and receive a single payment in each of the currencies where it has a net credit position. The maximum value of the resulting settlement exposure is simply equal to the sum of the amounts due to be received from the counter-party. However, measuring the actual duration of the exposure is more complicated because netted transactions result in a set of payments in a number of currencies, no two of which can simply be paired to calculate the period of irrevocability. Rather, the exposure will build up to its maximum value as the cancellation deadline for each of the net debit currencies paid is reached, and will fall as each of the net credit currencies is received. Any method of measurement – whether an exact measure or an approximation – needs to make appropriate allowance for this.

4.8.4 Moreover, to allow exposures to be measured on a net basis, the legal basis for payment netting arrangements should be sound. In particular, banks should ensure that a netting arrangement is legally enforceable in all relevant jurisdictions.

4.8.5 Some banks use informal payment netting - i.e. where there is no formal netting contract between the counter-parties. In this instance, the back offices of each counter-party confer by telephone before settlement and agree to settle only the net amount of the trades falling due. Since there may not be a sound legal basis underpinning such procedures, banks should ensure that they fully understand and appropriately manage the legal, credit, and liquidity risks of this practice. In particular, counter-party exposures should be treated on a gross basis for risk management purposes unless the bank has obtained clear legal advice that the informal payment netting is legally sound. Additionally, the practice and associated risks should be described in the bank's policy and procedures.

4.8.6 While bilateral netting arrangements can significantly reduce FX settlement risk, they are usually not capable of removing credit risk entirely. In addition, significant liquidity, legal and operational risks may remain. For example, if, because of operational problems, transactions that had been scheduled to be settled through a netting arrangement had unexpectedly to be settled gross, a bank might not have the liquidity to settle those transactions on a timely basis.

4.9. Alternative arrangements for FX settlement risk reduction

4.9.1 Banks with significant foreign exchange settlement exposures should give strong consideration to using such risk-reducing arrangements, either by participating in them directly or by taking advantage of third-party services. In evaluating whether to do this, banks should carefully assess the costs associated with the exposures, including both expected losses and the cost of economic capital associated with unexpected losses. While ultimately the decision to make use of risk-reducing arrangements should be based on the balance of all costs and benefits, it is particularly important that banks do not underestimate the benefits of risk reduction by assuming that sudden bank failures are impossible.

4.9.2 Banks should understand that, while risk-reducing arrangements are intended to significantly reduce important settlement risks, they may not eliminate all such risks. Thus, banks using such arrangements should have a thorough understanding of them and of the remaining risks they face - for example, liquidity, legal and operational risks. Moreover, even if banks use alternative arrangements for deals with major counter-parties, they are likely to continue to use the traditional gross settlement method for certain counter-parties and currencies. Therefore, banks should incorporate their use of alternative settlement arrangements into measures of and limits on FX settlement exposures, understanding that use of such arrangements does not eliminate the need for all such tools.

4.10. A bank's responsibilities to its counter-parties

4.10.1 The emphasis in this guidance has been on the steps banks take to manage the settlement risk that they themselves face. However, settlement risk is a two-way process - a bank also needs to be aware that its own behaviour affects the settlement risk faced by its counter-parties. As discussed in paragraph 4.5.2 above, banks should react in a balanced and considered way to any perceived counter-party problems. Banks should also minimise the possibility that, as part of their routine processing of FX settlements, they are the cause of settlement failures. For example, banks may want to consider whether, given the size and pattern of their transactions in the currencies concerned, they have enough liquidity on their nostro accounts to avoid payments being delayed because of shortages of funds. Further, the use of standardised settlement instructions may reduce the risk that payments are unintentionally mis-routed, particularly when there are changes to those instructions. Effective communication can also help to minimise the adverse impact of problems; it may therefore be helpful for banks to ensure they have procedures for informing key counter-parties when significant operational problems arise. By taking such steps to avoid routine, operational fails, or to minimise their impact, banks will make it easier to identify those cases where there is a more serious underlying problem.