THE
FOREIGN EXCHANGE COMMITTEE

ANNUAL REPORT
1983
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CHAIRMAN'S REPORT

The Foreign Exchange Committee enjoyed both an active and productive year during 1983. It performed an advisory role to the Federal Reserve Bank of New York. The Committee also acted as a forum for the discussion and the dissemination of information on new market developments and concerns.

The Committee directed considerable attention to the study of two specific subjects. The first, discussion of tape recording foreign exchange dealing and confirmations, culminated in the issuance of a recommendation urging bank management to consider installation of recording equipment. The second, discussion of the applicability of bilateral foreign exchange contract netting, generated sufficient interest to continue the study into 1984.

These two subjects are noteworthy not only for the attention the Committee gave to them during the year, but also for the increasingly complex and technical nature of the foreign exchange market. As the foreign exchange market in the United States has matured, there has been a rapid increase in complexity and innovation. Market issues being brought before the Committee have consequently become more technical. Such issues have both proved to be a challenge to the membership and served to reaffirm the desirability of having a focal point for discussion and guidance on matters of importance to the market.

In my opinion, the Committee has risen to the challenge. Its membership is broadly based and possesses the professional knowledge needed to deal with the increasingly complex issues facing bank management in the foreign exchange and Eurodollar markets. It also has benefited from the effectiveness and dedication of its members, both in the conduct of the Committee’s business and in communicating the Committee’s work to peers in the market place. Only with the active participation of all of its members could the Committee accomplish the work described on the following pages.

In submitting my final report, I would like formally to express my gratitude to the members and alternates who were responsible for the Committee’s work of the past two years. In addition, I would like to thank the Federal Reserve Bank of New York for the assistance and support it has given the Committee since its inception, and particularly during my term as chairman.

James P. Borden
THE COMMITTEE’S DELIBERATIONS ON MATTERS OF MARKET PRACTICE

Pursuing its role to provide guidance to the U.S. foreign exchange market, the Committee addressed several longstanding aspects of market practice and dealt with several new issues.

Reaffirmation of Statement on Management Issues

Intensifying competitive pressures and market challenges of 1983 underscored to Committee members the need for effective management of foreign-exchange trading operations. The Committee believes the 1980 paper, “Selected Issues Relating to the Management of Foreign Exchange Activity” still is timely and useful (see page 12).

In view of the high turnover among dealers, the Committee decided to reprint the document in the hope all institutions would review it and circulate it to trading and supervisory personnel.

Name Substitution Practices

As indicated in the 1982 Annual Report, the Committee circulated at the end of 1982 a paper on name substitution practices—the practices used by foreign exchange brokers to enlist a new counterparty in a transaction which cannot be consummated as originally structured.

The Committee urged all institutions to reappraise risks incurred when encountering name-substitution situations. Recent experience suggests the Committee’s paper helped to define the circumstances which generate these situations and delineated the issues management should consider in dealing with them.

Name substitution still occurs, typically when an active foreign-exchange trading bank temporarily reaches its limit with one or several potential counterparties in the market. However, the earlier rapid proliferation of this practice apparently has slowed. The time brokers inadvertently hold positions has been reduced. And, reportedly, fewer institutions are permitting their names to be substituted as a regular practice for other institutions.

Tape Recording

Early in 1983, the Committee considered a request from market participants to evaluate whether banks should use recorded tapes of conversations to confirm trades in the foreign-exchange and money markets and to resolve disputes concerning the terms of a transaction. Many foreign-exchange trading areas and/or confirmation operations of the Committee members’ institutions already had begun to record conversations. Their experience with taping was uniformly positive.

Taping can facilitate speedy resolution of disputes concerning trades or delivery instructions by revealing the source of any misunderstanding or error. Improving procedures for resolving disputes benefits banks in three ways:

- minimizes the number of occasions a bank would pay for mistakes of others or split losses because responsibility for an error cannot be determined;
- helps preserve institutional as well as personal relationships in the market by eliminating prolonged debate and uncertainty about a disputed transaction; and
- helps management determine if there are any regular patterns to the difficulties encountered in its own operation.

Relative to these advantages and the potential costs of time-consuming and lengthy disagreements, the cost of installing taping equipment is low.

Many Committee members believed that, as other institutions gained experience with recording of conversations, they too would come to realize a taped record of a telephone conversation affords protection to both the bank and its counterparties in foreign exchange transactions. The members expected taping to be a convention in the U.S. market for foreign exchange before long.

Under these circumstances, the Committee felt it appropriate to suggest strongly that all institutions active in foreign exchange thoroughly evaluate the tape recording of telephone conversations in both foreign-exchange trading rooms and confirmation areas.

Tape Safeguards

The Committee recognized, however, that the introduction of recording devices into trading operations raised several points of sensitivity for bank management. Bank staff may view taping as an invasion of privacy, or believe it lessens the confidentiality of conversations they have with other dealers and with customers. Management may be concerned that tapes of conversations might be used and disclosed in legal proceedings.

Consequently, the Committee also recommended access to tapes containing conversations be strictly limited to those personnel with supervisory responsibility. It also urged federal and state statutes and regulations concerning the recording of telephone conversations be followed and, whenever taping equipment is installed, counterparties be given due notice conversations will be taped. Further, it suggested tapes need not be retained longer than necessary to permit most disputes to surface.
Committee members who already had installed tape recording equipment in their own institutions believed the Committee might be in a position to share with other market participants insights gleaned from their own experience. Consequently, the Committee's recommendation included specific observations on the types of equipment which might be considered, secure storage of tapes, and procedures for notifying counterparties that taping equipment had been installed. The Committee also took the unusual step of supplementing its recommendation with a report which goes into these issues in greater detail.

After the circulation of these papers, most of the Committee members from institutions which previously had not taped conversations reported their institutions were now installing recording devices. They found the Committee's recommendation helpful in their own internal discussions and appropriately reflected the benefits of taping.

During the Committee's discussion of this issue, the Federal Reserve Bank of New York also indicated it intended to install tape recording devices in its foreign-exchange trading and confirmation areas early in 1984.

Netting

Another question which the Committee discussed at great length was whether it is appropriate to net offsetting transactions with a particular counterparty either for evaluating foreign-exchange exposure to that counterparty or for making payments.

Interest in "netting" increased as the volume of banks' outstanding foreign-exchange contracts grew absolutely and in relation to capital. Traditionally, banks include all their outstanding contracts with any given counterparty—even those which reflect offsetting transactions in the same currency and on the same value date—as part of their exposure to that counterparty subject to credit line limitation. In addition, banks typically pay the full amount of all outstanding contracts on the value date of the transaction.

As the volume of foreign-exchange business grew, pressure on existing credit limits intensified. Lines sufficient to meet counterparties' needs appeared increasingly to be disproportionate to bank size, raising questions whether banks are exposed to as much risk as traditional ratios imply. The volume of payments so increased as to heighten the possibility of misdirection of funds or other types of error at time of settlement. Under these circumstances, many institutions sought to examine possible approaches for netting offsetting transactions in order to evaluate credit risk, make payments or both.

The Committee started out discussing netting in the hope it might be able to determine whether a systematic netting procedure would be beneficial to the market. But as the Committee discussed the issue, it became clear that the subject encompassed a number of complex management and legal questions. The Committee decided to put together a program on various aspects of netting, drawing on its own membership to make presentations. The papers prepared for the program, which took place early in April, are printed beginning on page 15.

Legal Study Group Formed

Following these presentations, many Committee members concluded that the legal aspects of the issue might prove to be stumbling blocks to any systematic netting procedure. It wanted guidance on issues such as: what happens in the event of bankruptcy of the counterparty, how would a systematic netting procedure be established for the interbank market, and can a netting procedure be enforceable if a counterparty is subject to laws of a different country?

The Committee accepted the offer of Ernest Patrikis, Deputy General Counsel of the Federal Reserve Bank of New York, to organize a study group of lawyers from institutions represented on the Committee to consider these questions. The study group is scheduled to report to the Committee early in 1984.
NEGOTIABLE CERTIFICATES OF DEPOSIT FOR IBFs:
A Feasibility Study

Late in 1982, as the Committee discussed trading conditions in the Euro and foreign-exchange markets, considerable concern was expressed about the apparent illiquidity in the deposit markets, particularly around the end of the third quarter. Members also expressed disappointment that banks had not found their international banking facilities (IBFs) nearly as effective as they had hoped in raising short-term funds.

Committee members thought there might be a possibility of improving liquidity in the banking system, as well as for banks’ customers, by broadening the IBF market through issuance of negotiable instruments, such as certificates of deposit (CDs). Any action to increase potential sources of funding for IBFs was expected to have a beneficial effect on the market generally and alleviate, at least in part, some of the funding pressures then being felt most especially by foreign agencies and branches.

Under Federal Reserve Regulations “D” and “Q.” as adopted by the Board of Governors in June 1981, IBFs may issue time deposits or similar obligations which are transferable but nonnegotiable, and

PROCEDURAL MATTERS OF THE FOREIGN EXCHANGE COMMITTEE

Formal meetings of the Committee generally were held the first Friday of alternate months.

The June meeting was cancelled as it conflicted with a number of other international meetings. The October meeting was changed to permit a special informal meeting October 6 to accommodate the schedule of a guest addressing the group.

The Committee was honored to have as a speaker in October Stephen H. Axilrod, Staff Director of the Board of Governors, Federal Reserve System, as well as Secretary and Staff Director of the Federal Open Market Committee. He described the process through which monetary policy is discussed, decided upon, and implemented, drawing on several episodes from his personal experience.

The Committee issued one recommendation and a supplemental report concerning the taping of telephone conversations in foreign exchange trading rooms and confirmation areas (see pages 9-10). It solicited papers from its members on a variety of issues concerning netting of foreign exchange contracts (see pages 15-28).

The Committee also received an informal report from a special subcommittee established to consider the feasibility of preparing a proposal for negotiable CDs for IBFs. The subcommittee was chaired by Rolf Sellege (Morgan Guaranty Trust Co.) and comprised Yoshihiko Nagaya (Bank of Tokyo Ltd.), Raymond Peters (Bank of America N.T. & S.A.), and Bryan Walsh (Irving Trust Co.).

At year-end, the Committee was continuing its discussions about the netting of foreign exchange contracts. A subcommittee of lawyers was established to assist the Committee in this effort under the leadership of Ernest Patriki (Federal Reserve Bank of New York). Other members of the group are John Baerst (Barclays Bank International), Robert Hand (Bank of Tokyo Ltd.), Gordon Insley (Citibank N.A.), Kathleen Ludmar (Federal Reserve Bank of New York), John Mahoney (Bank of America N.T. & S.A.), James Matthews (Bank of New York), Peter McLaughlin (Marine Midland Bank), Barbara Parry (Credit Lyonnais), and Frank Puleo (Milbank, Tweed, Hadley & McCloy).

The 1984 agenda calls for the Committee to:

- evaluate restrictions on use of interest-rate futures contained in Banking Circular 79 of the Comptroller of the Currency;
- discuss foreign-exchange options and their use, and
- evaluate procedures for assessing credit risk on interest-rate swaps and 'onward interest-rate contracts.

In all its actions or suggestions, the Committee—in accordance with its charter—does not attempt to issue rules or regulations. Rather, it recognizes that the force of its recommendations is dependent on the persuasiveness of the suggestions and on the Committee’s ability to engender respect in the market for its views.
which are subject to restrictions designed primarily to limit the 
circulation of these obligations to foreign entities identified as eligible 
to hold IBF deposits. When considering the appropriate characteris-
tics of IBF liabilities, the Federal Reserve has been concerned that 
any negotiable instrument issued by an IBF soon might circulate 
freely in the United States, increasing the leakage of reservable 
deposits into IBF deposits.

The Committee recognized that any IBF proposal would have to 
address this concern. It believed, however, that by drawing on its 
members' expertise, the Committee would be in a position to 
determine whether an instrument might be designed that would 
meet the needs of IBFs and isolate domestic from international CDs 
for monetary control purposes.

In the end, the Committee concluded that it could not put forward 
a viable proposal. Nevertheless, discussion of this issue went into 
considerable depth within both the Committee and a four-member 
subcommittee established to study the issue.

Reasons for IBF Issuance of NCDs

The subcommittee identified two major reasons why banks might 
want their IBFs to be able to issue negotiable CDs (NCDs).

Banks could manage their asset-liability positions more flexibly 
without necessarily expanding the size of their total balance sheet. 
They would no longer have to rely so heavily on increasing the 
quantity of both interbank deposit assets and liabilities on their books 
to adjust maturity profiles to changing market conditions. Instead, 
they could adjust the maturity composition of a portfolio of NCD's 
through sales and purchases in such a way as to minimize the effect 
on balance sheet size. The increased focus on capital adequacy by 
regulatory authorities makes efficient use of the balance sheet 
increasingly important.

Banks could probably borrow at lower cost by issuing NCDs. A 
class of eligible IBF depositors—foreign pension funds, insurance 
companies, and some official institutions—do not currently use IBFs 
because of investment limitations requiring these depositors to hold 
negotiable instruments. The subcommittee anticipated that these 
investors might be interested in NCDs of IBFs. Also, an NCD of an IBF 
was thought to represent a unique instrument, providing greater 
liquidity to the investor than a fixed time deposit and yielding a 
Eurodollar-based rate but carrying a United States country risk.

Attempts to Devise an Instrument

The challenge was to devise an instrument which would be 
appropriate to investors, be relatively simple to administer, invite 
the development of a viable secondary market, and meet the Federal 
Reserve's requirements. The subcommittee attempted to develop a 
proposal for an instrument in which all holders would be "eligible" 

customers of IBFs and all issuers would be "eligible" institutions, as 
required by current regulations.

The subcommittee believed the easiest solution would be for the 
Federal Reserve to provide a book-entry system to assure the eligibility 
of all participants. A Reserve Bank would know the depository of the 
NCD and the depository could be required to ensure it held the NCD 
for an eligible IBF depositor.

However, the New York Fed indicated that it would be premature 
for the Federal Reserve to consider developing a book-entry system 
for NCDs of IBFs at this time. The subcommittee, therefore, had to 
consider other alternatives.

Three Approaches Proposed

In its report to the Committee, the subcommittee proposed three 
possible approaches for structuring NCDs for IBFs.

The first two approaches established control over the eligibility of 
the investor by registration. The issuing bank would always know the 
name of the holder of the instrument and there would be no change 
in the domicile of the instrument.

In the first option, restrictions pertaining to the holding of the 
instrument would be an integral part of the physical security. If the 
certificate were resold, it would have to be re-registered with the 
original issuing bank.
In the second option, registration would be in book-entry form; the issuing bank would not deliver the instrument to the investor. If the investor sold the certificate, the investor would notify the issuing bank and request re-registration.

Even with these advantages, the subcommittee doubted such an instrument would be readily accepted in the market. The characteristics required to enforce the Federal Reserve's rules for eligibility of issuers and holders rendered it complicated to understand, difficult to market, and unsuitable for a truly active secondary market.

The third approach maintained control over the eligibility of the investor through the safekeeping of the security, rather than by way of registration at the issuing bank. The issuing bank would issue instruments, either in physical or book-entry form, and send them to a safekeeping unit. The safekeeping unit could be a bank or another institution, it might be centralized, as would be the case if a Federal Reserve Bank were to provide the service, or be decentralized as is suggested in the diagram in the adjacent column.

**Safekeeping Preferred**

The subcommittee preferred the third option. It was the most likely to facilitate movement of the instrument among banks, provide the fewest problems for development of a secondary market, IBFs, foreign banks, and dealers in foreign locations were able to operate in the market. Such an alternative also would be simpler to a future electronic environment.

Thus, the subcommittee concluded it would not be feasible to develop a negotiable instrument for IBFs which met all the criteria.

By the time the subcommittee had rendered its report, the need for a new instrument appeared less pressing. The market for CDs in the United States had entered a more subdued phase. U.S. banks were no longer bidding as aggressively for funds, partly because of the introduction of money market deposit accounts. Other factors continued to slow the development of IBFs. Consequently, the Committee concluded the time was not right to pursue this issue.
THE COMMITTEE'S ADVISORY ROLE TO THE FEDERAL RESERVE BANK OF NEW YORK
AND OTHER OFFICIAL INSTITUTIONS

The Committee again was active in 1983 as a forum for exchange of information among private market participants, the Federal Reserve, and other U.S. and foreign official institutions.

Foreign Exchange Turnover Survey

One of the Committee's major contributions during the year was to advise the New York Reserve Bank in connection with a survey of turnover volume in April 1983.

The Committee in 1982 had recommended a survey be taken. It believed changes in market size and structure had been substantial since the previous survey of 1980, and a new survey would be helpful to market participants in their planning.

The Committee urged the Federal Reserve to encourage other central banks to conduct a similar exercise. The Committee also provided specific and technical suggestions to improve the survey form.

The Committee also assisted the New York Federal Reserve Bank in evaluating market trends reflect in the survey. Members commented on the pace of growth in the U.S. market, noted the changing shares of currencies, and types of foreign exchange business, and made estimates of the size of the U.S. market relative to others. Many of these comments were helpful in preparing the "Summary of Results" of the survey published by the New York Fed and reprinted starting on page 30.

Recent Growth in U.S. Foreign Exchange Market

Many members commented they believed the U.S. market in foreign exchange had become more active during the course of 1983.

A number of members reported the market had greater depth in the afternoon—a phenomenon attributed to increased corporate activity and a growing market on the West Coast.

Pressures on Dealers

Committee members noted there had been an unusually high level of turnover among senior dealers during the year.

They admitted that foreign exchange dealers are under increasing pressure to perform, and not all dealers respond to these pressures equally well. But overall compensation for experienced trading personnel is high, partly in recognition of the risks they are expected to assume.

RECOMMENDATIONS PREPARED IN 1983

Taping of Telephone Conversations In Foreign Exchange Trading Rooms And Confirmation Areas

(September 2, 1983)

Taping dealer telephone conversations, as well as the conversations of personnel confirming transactions, has become a growing trend in foreign exchange operations. The Foreign Exchange Committee reviewed this practice and concluded taping of dealer conversations and those of confirmation personnel is generally desirable.

The Committee suggests banks active in foreign exchange thoroughly evaluate the tape recording of telephone conversations in foreign exchange trading rooms and confirmation areas. Taping of all lines used for trading and confirmations will help resolve disputes readily and accurately with concomitant benefits accruing to the parties involved. Management may wish to provide untaped lines or install cut-out switches to give dealing personnel the opportunity to hold unrecorded conversations on sensitive topics. In addition, some banks may choose to provide personnel handling customers with untaped phone lines to be used in those cases where a customer has requested their conversations or transactions not be recorded.

Access to tapes containing conversations should be strictly limited to those personnel with supervisory responsibility for trading, customer dealing or confirmations. Tapes should be kept in secure storage for two weeks to a month—a time sufficient for most disputes to surface—and then recycled. With the provision of untaped lines and security procedures, bank management should find their dealers and corporate traders will have little resistance to taping as a general operating procedure.

Whenever taping equipment is installed, banks should give counterparties due notice that henceforth conversations will be taped. A single broadcast, by letter or telex, should be made to all existing counterparties stating that taping systems are being installed on dealing and confirmation lines to aid in the resolution of disputes. Subsequently, before trading is initiated with any new dealing partners, banks should also give written notice that conversations will be taped. Finally, management should ensure federal and state regulations on recording of telephone conversations are followed.

The factors the Committee considered in developing this recommendation are summarized in the report on page 10.
Taping of Telephone Conversations in Trading Rooms, Confirmation Areas: A Report
(August 30, 1983)

This report identifies and summarizes the positive and negative aspects of taping and indicates several points of sensitivity management may wish to consider before installing recording equipment.

Benefits of Taping

The dominant benefit from taping dealer conversations and those of confirmation areas is the speeded resolution of disputes concerning trades or delivery instructions. By listening to a recording, one can readily determine where any misunderstanding or error pertaining to a specific transaction may lie.

Improving procedures for resolving disputes by utilizing tape recordings benefits banks in several ways.

It reduces to a minimum the number of occasions a bank would pay for the mistakes of others, or have to split losses because responsibility for the error cannot be determined.

It helps preserve institutional as well as personal relationships in the market by eliminating prolonged debate and uncertainty about a disputed transaction.

Moreover, proper resolution of disputes will help management identify any systematic difficulties which may arise in its own operation.

The cost of installing taping equipment is low relative to the savings which are achieved if disagreements are resolved without time-consuming and costly procedures.

Negative Aspects of Taping

On the negative side, some bank dealers believe taping is an invasion of privacy or can lessen confidentiality. These dealers may be less willing to share views with other market participants if they know their conversations are recorded; some topics may be considered too sensitive to be committed to tape.

Hence, dealers express concern others in turn may be reluctant to pass on the same amount or quality of information which would be available in the absence of tapes. Similarly, there is concern that some customers of bank dealers which often reveal intimate details of their foreign exchange exposure and timing of their transactions may be reluctant to discuss their affairs in detail knowing their conversations are taped.

Finally, management may be concerned tapes of conversations could be subpoenaed for use in legal proceedings.

Dealing with Taping Concerns

There are several ways in which objections to different aspects of taping can be handled.

Trading rooms can be equipped with untaped lines—phones traders can use to make or receive calls where sensitive information might be exchanged—separate from the dealers' consoles. Dealers or corporate traders would have to make a specific effort to use these lines when wishing to exchange information; these untaped lines would not be used for trading.

Alternatively, some combinations of recording and phone equipment permit the installation of switches to stop a tape or block recording at individual work stations. Where individual cassette devices are used at single work stations, they may simply be turned off. Where wide band recording machines—those capable of tracking many lines or work stations on a single tape—are used, it is possible with some telephone equipment to install a switch which will block transmission from a work station to the wide band tape.

However, such an approach has the disadvantage that a dealer or corporate trader may neglect to re-engage a taping device. Only those systems where taping automatically resumes on the next call after being switched off, or where there is continuous taping, can ensure calls will not be missed.

Concerns by foreign exchange personnel that tapes may be used for purposes other than verifying information on a disputed trade can be readily addressed by management.

Statements reinforced by demonstration that tapes will not be used for trading purposes, performance evaluations, or displaying the operations of a trading room to outsiders are likely to allay these concerns significantly.

Secure storage of tapes, as well as restrictions on access to tapes to senior trading and confirmation personnel will further contribute to a sense that tapes are being used only for their stated purpose.

It is desirable to retain the tape for the period in which most errors will be discovered. Tapes can be recycled after the normal period in which transactions are consummated and confirmations are received. The longer a tape is stored, the more likely it could be used for an improper or undesirable purpose.

Retention of tapes for longer periods may be costly and provide few significant benefits.
SELECTED OTHER DOCUMENTS
OF
THE COMMITTEE

ISSUES IN MANAGEMENT OF
FOREIGN EXCHANGE ACTIVITY

NETTING OF
FOREIGN EXCHANGE CONTRACTS
SELECTED ISSUES RELATING TO THE
MANAGEMENT OF FOREIGN EXCHANGE ACTIVITY

(Reprint of 1980 Paper of the Foreign Exchange Committee)

Managers of foreign exchange activity have available to
them a wide variety of material concerning the nature of the
basic risks inherent in the business. The most recent con-
tribution to the literature was the publication of the "Guidelines
on Internal Control for Foreign Exchange Activities in Com-
mmercial Banks" issued by the Federal Financial Institu-
tions Examination Council. That document, which was designed to
guide bank examiners, provides a very useful uniform frame-
work for establishing the internal controls and procedures
necessary to manage and control exchange risk.

In the view of the Foreign Exchange Committee, however,
there remain a number of market practices and potential areas
of management concern that have not been explored
adequately in the literature. This report is designed to satisfy
that need and enhance managers' awareness and under-
standing of these issues.

Conflict of Interest

Most banks today recognize the need to establish a code of
conduct for all their employees to protect both the bank and the
employee from potential conflict of interest situations. Neverthe-
less, the role of the trader—in particular the unique ability independ-
ently to commit the bank to sizeable risk exposures—suggests that some
further amplification of the general code of conduct is desirable for
the trading function. With respect to a potential conflict of interest
arising from an individual's own financial affairs, we suggest that
banks should have policy guidelines covering trading for one's own
account.

TRADING FOR ONE'S OWN ACCOUNT: There
is an obvious potential conflict of interest in this
situation that should be discouraged. However,
one may wish to distinguish between trading and
investment. A trader might buy a foreign currency
and invest the proceeds in a deposit or security
denominated in that currency; a trader might sell
a foreign currency forward to hedge an existing
deposit or security transaction. Identifying
investment as opposed to trading transactions is
not always a simple matter, but a clear
understanding between manager and trader of
what the bank's policy is in this area will eliminate
most potential confusion. Outright position taking
by traders should be prohibited.

The money and exchange markets are primarily telephone
markets and ones in which close personal ties often develop
between professionals. On the positive side, this facilitates the
smooth functioning of the market. On the other side, it opens the
possibility that a trader could be tempted to assist a fellow
practitioner at the expense of the employer. Consequently, the
following two potential problem areas should be covered:

GIFTS, ENTERTAINMENT: This subject ordi-
narily will be covered by the bank's general code
of conduct, and management should recognize
that social entertainment is a widely accepted
practice among market participants. However,
given the special connections among traders, and
between traders and brokers in the distribution of
the bank's business, management should be alert
to the possible abuse of entertainment or gifts.

OFF MARKET RATES: Any use of "off market"
rates raises serious questions of propriety and
perhaps policy issues for the bank. This issue
most often arises in connection with swap trans-
actions where there can be a choice between
using "current" or "historical" rates. Although
the essence of a swap transaction is neither the
spot, nor the forward rate per se, both of these
rates utilized in the swap should be consistent
with current market rates. Non-market rates can
be employed to move income from one institution
to another (perhaps over an income reporting
date) or can impact upon the timing of reported
taxable income. In any event, since use of
historical rather than market rates can in effect
result in a loan of funds between the parties, all
such requests should be referred to management
for policy and credit judgments. While the nature
of certain commercial transactions may justify the use of historical rates with customers, there should be no exceptions permitted in trades with other banks.

The Trader - Trader Relationship

With the growth of direct bank-to-bank trading in the North American market during the last two years, this topic has taken on new importance. Many banks are now dealing directly at a time when the market's rapid expansion has led to a situation in which a large number of young and relatively inexperienced traders have been given significant responsibility in representing the participating banks. This suggests the necessity of clearly defining a code of behavior in the trader-trader relationship.

RECIPROCITY: Management must be conscious of the obligations their bank assumes when it engages in direct dealing. Generally speaking, "Bank A" will be expected, upon request, to reciprocate in providing timely, competitive rate quotations for marketable amounts when it has received this service from "Bank B." Differences in the relative size of "Bank A" and "Bank B" and in their expertise or specialization in certain currencies will influence the determination of what is perceived by the two parties as an equitable reciprocity. A periodic analysis of trading activity by management will reveal any unusually large concentration of direct trading with another bank or banks. Any such concentration should be reviewed by management to assure that the level of activity is appropriate.

The Trader - Broker Relationship

The use of brokers is a long standing feature of the foreign exchange market. Relationships between brokers and traders are based on a variety of factors, including quality of service (speed, reliability, closeness of prices, size of deals) and personal interaction. In these circumstances traders are quite likely to favor a few brokers over others and such concentration is not inappropriate. However, inasmuch as it is possible for a trader to influence a broker's share of the bank's business, there is always the possibility that some brokers may attempt to ingratiate themselves with a trader or that a trader may make unreasonable demands upon some brokers.

Therefore, managers should be alert to subtle changes in patterns of brokers used and to possible undue concentration of business, especially if they perceive no significant difference in the quality of service from other brokers.

Bank management will find that their broking counterparts will welcome any questions or input concerning the nature or extent of entertainment provided to traders or any aspects of the relationships between their firms.

In the interest of preserving confidentiality of transactions, visits by traders to brokers' offices during the trading day should normally be pre-arranged. During such visits traders should not participate in the interbank market through utilizing the on-premises communications network.

Traders should not conclude a deal through a broker when the counter-party is not identified, for it opens the way to possible confusion, to potential abuses and to the possibility that the bank might be left with a credit risk that it did not wish to assume.

Brokers should take full responsibility for confirming all international transactions to the banks by Telex, or by any other means of written confirmation acceptable to the banking community. In addition, brokers have responsibility for passing instructions on all spot international transactions on the same day the trade is consummated.

Trading practices

At times when the markets are unsettled and prices are volatile, opportunities may arise for traders to engage in practices which may result in an immediate gain or void a loss, but which may be questionable in terms of the trader's reputation—as well as that of the bank—over the long run. The kinds of questionable practices are many, from sowing rumors to renegotiating deals.

Management should be alert to any pattern of complaints about a trader's behavior from sources outside the bank, such as by customers or other banks. Information available within the bank should be reviewed to detect if individual traders become frequently involved in disputes over trades or tend to accept deals at rates which were obvious misquotes, accidental or otherwise, by counterparts. Complaints about trading practices may be self-serving, however, and should be handled judiciously.

Confidentiality

The issue of confidentiality deserves special consideration.
Participants in the market—commercial accounts and banks alike—are entitled to have their interest and activity known only by the other party to the transaction and the intermediary, if one exists.

Bank management should ensure that traders are regularly reminded of this need for confidentiality.

In our 1979 Annual Report The Committee commented upon “... the practice of having open two-way speakerphones between banks and brokers. A number of Committee members pointed to the benefits that speakerphones provided in transmitting bid-offer quotations quickly to many banks. At the same time, there was considerable concern about the need to maintain confidentiality of operations of banks, within their own trading rooms and with their customers.” In the end, the Committee concluded that “it believed continuously open speakerphones at either the banks’ or brokers’ end to be inappropriate and that both ends should, as a minimum, be controlled by the use of press-to-talk-buttons.”

While discussion between the traders of “Bank A” and “Bank B” concerning the activity of “Bank C” is to be condemned, it is most appropriate for the management of “Bank A” to advise the management of “Bank C” of impressions of undue or unusual market activity by “Bank C’s” traders.

The trading room is a popular spot for visitors who enjoy the clatter and excitement that can readily result from an active market. Unfortunately nameless of participants can often be recognized by visitors. We suggest, therefore, that visits to trading rooms by outsiders be minimized and that every effort be made during such visits to preserve confidentiality.

Importance of Support Staff

Management’s attention with respect to a foreign exchange trading operation is usually directed to establishing trading policies, managing risk and developing trading personnel. Equally important both to the management and the shareholders of the bank and to those counterparties with it is an efficient “back office” or operating staff. Details of each trading transaction must be accurately recorded; payment instructions correctly exchanged and executed; timely information provided to management and traders; and the underlying results properly evaluated. Time consuming and costly reconciliation of disputed or improperly executed transactions mar the efficiency of the market and ultimately can impair the willingness of others to trade with the offending bank.

Accordingly, management must be aware of its responsibility to establish a support staff consistent with the scope of its trading desk’s activity in the market. Conversely, traders must be instructed to confine trading levels to volumes that can be handled by the available support staff.

Off-Premises Trading

Foreign exchange trading today literally takes place continuously somewhere in the world throughout the twenty-four hours of the trading day. This requires policy answers to several questions: Will management accept requests to trade from parties who are obviously trading outside of their normal market time? Will management permit their trading personnel to initiate trades after normal trading hours - from home or elsewhere? If so, how will they control the transaction? With respect to requests received from third parties, the major concern must be a determination of whether the trader calling from abroad after normal trading hours was authorized by the bank to trade at that time. Use of Telex rather than telephone will at least confirm the physical presence of the trader in the trading room, although by itself this does not answer the basic question of authorization.

When the request is initiated by a commercial customer communicating from one geographic trading center to another, presumably the arrangement will have been discussed in advance and a modus operandi arranged that will identify and protect all parties. Management should determine how detailed they want this procedure.

When trades are initiated either from the office after the support staff has left or from the trader’s home, there is no way to record the trade and its impact upon the bank’s position until the following business day. If the bank has a global network, it seems prudent to restrict such trading to intrabank transactions with copies of the trade to be forwarded by the receiving location to the initiating location.

If management chooses to provide its trading room with flexibility to cope with the unexpected — the call either at midnight from abroad or from the trader’s home — it should certainly restrict the authority to designated senior trading personnel.
CREDIT RISKS IN THE FOREIGN EXCHANGE BUSINESS

By Heinz Riehl

Credit risks in foreign exchange can be divided into two main categories—counter-party risk and clean risk at liquidation.

Counter-party risk, also called the 20 percent risk, refers to the possibility a customer or trading partner fails before the maturity date of a foreign exchange contract. If there were to be an adverse movement in the exchange rate and the contract had to be replaced at the prevailing market rate, the bank could be exposed to a market risk. It is assumed the increased cost of replacing the contract would not exceed 20 percent of the value of the contract, unless the currencies traded are likely to have exceptionally large fluctuations. Also, contracts with maturities longer than 3 years might be allocated an incremental risk-percentage, such as 5 percent per year (see chart 1).

Clean risk at liquidation, also known as the 100 percent risk, refers to the possibility the customer or trading partner fails on the maturity date. One party to the contract makes payments, but the other party fails—as in the case of the Harstatt Bank in Germany. Different time zones increase this risk, if, for instance, a European currency was sold and must be paid and US dollars are to be received (see chart 2). The bank does not get its anticipated payment and also may have to replace the original contract, exposing it to a maximum total loss of 120 percent.

Limiting Credit Risk

To recognize and limit these credit risks, banks establish standard exchange lines for each customer/bank. They set limits for the total contracts outstanding and sub-limits for clean risk at liquidation (see chart 3). Application of that formula, and particularly the 20 percent on counter-party risk, leads to very large lines and theoretical credit exposures when applied to the most active trading partners (see chart 4).

A solution might be to re-evaluate the magnitude of the real risk to which the bank is exposed with each of its largest counterparties.

Mark-to-market Calculation

One approach is to revalue to market rates all outstanding contracts with each of these counterparties. This alternative is particularly applicable if one deals actively with certain trading partners in a variety of currencies and on both sides of the market, i.e., as a buyer and a seller.

Under this approach the manager will periodically—weekly or monthly—mark to market or rebate every transaction outstanding with a given counterparty. Thus, the manager will simulate bankruptcy of a given counterparty and determine at which rate every contract could be replaced.

A comparison of the actual rate on the existing contract with the rate at which the contract could be replaced will identify a positive or negative variance (see table 1).

An aggregation of all positive and negative variances on all contracts outstanding with a given counterparty will indicate the true market risk with that particular trading partner. In most cases it will be less than 20 percent of all the outstanding contracts with one party; it even could be positive.

In the latter situation, it means the contracts could be replaced at more favorable rates, in which case there is no market risk. Under these circumstances, a net due to the trading partner in case of a bankruptcy could be offset against otherwise uncollectable receivables.

To implement the procedure, one could group outstanding exchange contracts with a given trading partner by calendar month, or even half month, and establish prevailing market rates for each currency and each period. If the amounts are very large in some cases, market rates should be adjusted to reflect likely movements in the market rate if such a large amount would have to be transacted.

Several tests using this estimate of loss for each counterparty revealed failures would produce losses not exceeding two percent. The procedure has proven to be effective for active, two-directional trading partners.
TABLE 1
MARKET RISK ON FOREIGN EXCHANGE OUTSTANDINGS FOR BANK XYZ

Based on Mark-to-Market Calculations

<table>
<thead>
<tr>
<th>Currency Amount Outstanding</th>
<th>Bought/Sold</th>
<th>Delivery Month</th>
<th>Contract Value</th>
<th>Market Value</th>
<th>Market Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM 10,000,000</td>
<td>B</td>
<td>March</td>
<td>$329.40/100</td>
<td>3,940,000</td>
<td>840.80</td>
</tr>
<tr>
<td>SF 4,000,000</td>
<td>B</td>
<td>March</td>
<td>4820</td>
<td>1,928,000</td>
<td>48.10</td>
</tr>
<tr>
<td>FF 20,000,000</td>
<td>B</td>
<td>May</td>
<td>16.60</td>
<td>3,300,000</td>
<td>16.20</td>
</tr>
<tr>
<td>L 3,000,000</td>
<td>B</td>
<td>June</td>
<td>1 80</td>
<td>5,700,000</td>
<td>1 85</td>
</tr>
<tr>
<td>Y 1,000,000,000</td>
<td>B</td>
<td>August</td>
<td>40</td>
<td>4,000,000</td>
<td>41 41</td>
</tr>
<tr>
<td>DM 7,000,000</td>
<td>B</td>
<td>October</td>
<td>41 10</td>
<td>2,877,000</td>
<td>41 70</td>
</tr>
</tbody>
</table>

Formula Risk: $4,340M
Actual Risk: $4M

21,748,000
22,123,000
- 44,000

The example shows that on a total of $21,748,000 of exchange contracts outstanding, only $94,000 would be lost, if that particular counterparty would fail and all contracts had to be replaced at prevailing market rates. That is a loss of only 2.3% and substantially less than the 20% assumed risk, which would suggest that risk is 20% of $21,748,000 or $4,340,000. Under the "mark-to-market" system, the total credit risk resulting from an exchange line will be the clean risk at liquidation plus the market risk as calculated above. Obviously, the size of the market risk fluctuates with change in the market rates.

Other Solutions

Other solutions might also be considered, but they have clear limitations (see chart 5). One could net the same currencies for the same maturity dates between two trading partners. The opportunity to net under these conditions would be infrequent, thus, this procedure would not effectively reduce the need for large lines. One could net the same currencies between two trading partners for different maturity dates. This procedure would permit more opportunities to net.

Possible alternative approaches for reducing clean risk at liquidation also have their limitations (see chart 6). Reducing the limits covering transactions maturing on any given day would reduce the clean risk at liquidation but would also negatively impact trading activity. Netting transactions one business day before maturity could be effective, but is operationally complicated.

- Reduce lines: impacts trading activity
- Netting one business day before maturity: effective, but operationally involved

but may also lead to forced trading.
ADVANTAGES FROM NETTING FOREIGN EXCHANGE CONTRACTS

By Ray Peters

There are three different concepts associated with the thought of netting offsetting foreign exchange contracts:

- **UNILATERAL RISK RE-EVALUATION** - A bank might interpret the effective credit risk for a counterparty, other than settlement risk, as the net mark-to-market value of all outstanding forward contracts.

- **MASTER CONTRACT** - Formalize the above approach under a master contract between actively trading counterparties. Individual transactions remain on the books, but the counterparties recognize each trade as a piece of the master contract.

- **EXTINGUISHMENT** - Counterparties agree to cancel or retire existing forward contracts on a date prior to maturity with only net funds payment.

The following discussion uses its definition for “netting” the extinguishment of contracts prior to maturity and the subsequent movement of net funds.

The two general times when contracts can be netted are immediately prior to the contract’s maturity, known as “cash settlement netting,” and “forward netting”—the periodic netting of outstanding forward contracts as soon as possible after they are executed.

**Cash Settlement Netting**

The advantages of cash settlement netting are reduced credit and liquidity risks, as well as reduced operating costs. Netting can greatly reduce credit risk due to the reduction of clean risk at liquidation caused by multi-time zone currency clearing. For U.S. clearing system members, netting can reduce the systematic risk caused by gaps from intra-day offsetting flows of funds.

Liquidity risks, such as those created by operational problems which affect one of two offsetting transactions, also can be reduced by netting. This applies to foreign currency flows as well.

Operational costs of foreign exchange trading can be reduced by netting contracts prior to the cash settlement date. The frequency of overdraft penalties on both U.S. and foreign currency clearing accounts, as well as the implicit cost of float, would be reduced. Also, payment costs and volume of transactions on both the U.S. and foreign payments systems could be reduced.

**Forward Netting**

Forward netting—periodically netting offsetting contracts soon after they are made—also reduces the costs, credit and liquidity management benefits associated with cash settlement netting. In addition, forward netting improves the management of credit risk by reducing the actual level of forward foreign exchange contracts subject to counterparty risk, improving a bank’s measure of counterparty risk, and increasing the availability of credit lines for other transactions.

Additional advantages from forward netting include the improvement of the depth of foreign exchange markets as limits, which often restrict dealing, are freed.

Further, there would be a reduction in U.S. regulatory risks created by the change in regulators’ attention to offbalance sheet items.

**Key Issues**

Although there are several advantages to both netting procedures, a number of key issues need to be addressed before such a procedure could be adopted. For example,

- How many currencies should be netted?
- How can the operational costs/benefits be evaluated?
- How should foreign branches be incorporated in a netting procedure, both from an operational point-of-view and in a way which resolves differences in taxes and other institutional aspects for the branches, and
- In the event of bankruptcy, would a lawyer sue to resurrect the cancelled contracts?

Forward netting produces some additional issues which can be especially complicated:

- At what frequency should contracts be netted, how far forward, and for what maturity date;
- For each currency, should contracts be netted for single or multiple days and then how should the time value of money be recognized;
- How should residual values be accounted for; and
- If cross-currency netting were included, what exchange rate should be used to revalue outstanding commitments, and how do the two parties agree to that rate?
ADVANTAGES FROM NETTING FOREIGN EXCHANGE CONTRACTS
(Assumes Extinguishment of Contracts and Net Funds Movement)

CASH SETTLEMENT

Reduced Credit Risk
- Reduced clean counterparty risk at liquidation caused by multicurrency clearing
- For U.S. clearing system members, reduce systematic risk caused by gaps from within day offsetting flows

Reduced Costs
- Reduced U.S. and foreign currency clearing account overdraft penalties and float caused by operational problems
- Reduced payment operational costs
- Reduced transactional volume pressure on payment systems

Reduced Liquidity Risks
- Operational problems which impact one side of offsetting transactions create liquidity management problems

FORWARD OUTSTANDING CONTRACTS

Improve Counterparty Risk Management
- Reduce level of counterparty (foreign exchange contract) risk
- Improve the measurement of counterparty (foreign exchange) contract risk
- Increased availability for other credit lines

Improve Depth of Foreign Exchange Markets

Reduce U.S. Regulatory Risks
- Regulatory authorities giving increased attention to off-balance sheet items vs. capital
NETTING FOREIGN EXCHANGE TRANSACTIONS
IN THE SAME CURRENCY FOR THE SAME VALUE DATE

By Kathleen W. Ludman

There are several possible ways to "net out" foreign exchange obligations of two U.S. commercial banks in the same two currencies maturing on the same value date. The method which appears most feasible would be a contract between two banks to net out their mutual obligations in two currencies for each value date. Practically, such a contract would require the computation of the net balance at some agreed upon time, either daily, weekly, monthly, or at the close of trading the day prior to the value date. Legally, such a contract would be unobjectionable. Earlier netting would reduce risk. Netting later would reduce risk associated with the "delivered" of the currencies and result in a smaller number of transfers of funds on payments systems, such as the Clearing House Interbank Payments System.

Netting foreign exchange transactions becomes workable when two banks routinely trade in any two currencies. Transactions can vary widely in quantities traded and in terms. For a given value date, Bank "A" might be obligated to provide to Bank "B" Swiss francs for U.S. dollars on two spot and one six-month contract and to provide dollars for Swiss francs on a three-month contract and two spot contracts. Bank "B," as counterparty to these agreements, would be obligated to reciprocate by delivering the other currency on each contract.1

The reciprocal obligations might look like this.

<table>
<thead>
<tr>
<th>date undertaken</th>
<th>value date</th>
<th>&quot;A&quot; obligation</th>
<th>&quot;B&quot; obligation</th>
<th>rate (SF/US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Con. 1</td>
<td>3/30/83</td>
<td>4/1/83</td>
<td>103.76 SF</td>
<td>US $850</td>
</tr>
<tr>
<td>Con. 2</td>
<td>3/30/83</td>
<td>4/1/83</td>
<td>83.20 SF</td>
<td>US $940</td>
</tr>
<tr>
<td>Con. 3</td>
<td>9/30/82</td>
<td>4/1/83</td>
<td>208.65 SF</td>
<td>US $9100</td>
</tr>
<tr>
<td>Con. 4</td>
<td>12/31/82</td>
<td>4/1/83</td>
<td>US $860</td>
<td>118.68 SF</td>
</tr>
<tr>
<td>Con. 5</td>
<td>3/30/83</td>
<td>4/1/83</td>
<td>US $8300</td>
<td>823.40 SF</td>
</tr>
<tr>
<td>Con. 6</td>
<td>3/30/83</td>
<td>4/1/83</td>
<td>US $930</td>
<td>82.43 SF</td>
</tr>
</tbody>
</table>

The transactions present three constants, the identical parties, two currencies and value date.

Under present practice, each transaction, separately undertaken, is considered an independent contract. Each party is liable to deliver each quantity of currency promised. And the obligations on each contract are, in fact, separately performed.

The question is whether this process can be simplified by replacing each party's obligations for any value date by a single net obligation. In the example, the result of netting would be that Bank "A" would be obligated to deliver only $200 April 1, while Bank "B" would be obligated to deliver only 408.76 Swiss francs.

Such a change would possibly simplify procedure; it would assuredly lessen each party's risk. This is true because of the potential adverse consequences to banks of two sorts of occurrences, the first exemplified by the failure of the Herstatt Bank in West Germany in 1974, when U.S. banks suffered losses because of the time zone difference. Some U.S. banks had delivered currencies to Herstatt, which was closed by government regulators before it could reciprocate. If the U.S. banks had less exposure because their obligation was the net due Herstatt on the value date, they would have suffered a smaller loss. U.S. banks could have reaped a windfall if they had received first. Nevertheless, netting, by greatly limiting the possibility of either situation occurring, is a more equitable method of reducing exposure. It accomplishes this simply by reducing the number of payments, such as, the number of foreign exchange U.S. dollar payments through CHIPS.

Another worrisome situation, for which netting is only a partial remedy, can arise when a counterparty domestic bank fails. Under the Bankruptcy Code, which does not cover banks, the trustee in bankruptcy has the right to reject any executory contract on purely business grounds, which the trustee will do if the contract does not benefit the bankruptcy estate; rejection leaves the other party a breach of contract claim and an unsecured creditor status.2 Similarly, the Federal Deposit Insurance Corporation as potential receiver of a national bank once threatened to assert a right to disaffirm foreign exchange contracts which, because of rate movements or other factors, were not profitable for the closed national bank, although insisting on full performance of contracts on which the receiver expected to realize a profit.3 This is one of the reasons the New York Reserve Bank assumed the foreign exchange book of the Franklin National Bank.

Disaffirming Executory Contracts

The right of a receiver of an insolvent national bank to disaffirm executory contracts is not set forth in the National Bank Act.4 While there are no judicial decisions dealing with foreign exchange contracts of insolvent national banks, the Federal Deposit Insurance Corporations takes the position that when, in its role as receiver, it rejects an executory contract, it expects the counterparty to submit a proof of claim for its damages. In normal course, the counterparty which proves its claim would be entitled to receive those damages in the same proportion as other unsecured creditors of the insolvent bank.5

5
Netting only partially addresses this problem since the greatest risk in this situation is not of direct loss, as in the Herstatt situation, there is no risk of direct loss because, if the receiver does not disaffirm a contract, the receiver is obligated to perform the commitment. The greatest risk is rather of being forced to cover open positions at unprofitable exchange rates. This risk remains whether a bank is obligated to deliver its net commitment or the total currency it has promised. In fact, netting might lead to disaffirmance of the entire obligation, while some separate agreements might be performed if there is no netting agreement. There would also be loss incurred because the only transactions on which performance would be demanded would be those resulting in profit to the insolvent bank and loss to the counterparty.

In the hypothetical set of dollar-Swiss franc transactions, if Bank "B" went into receivership March 31, 1983, and the spot rate on April 1, 1983 was 2.0650 Swiss francs per dollar, its receiver would likely decide to honor contracts 1, 2, 3, and 4, each of which would yield the receivership some profit. Contracts 5, and 6, because of normal fluctuations in trading terms, would have given it a profit, and thus be disaffirmed. As a result, Bank "B" would pay $130 and receive 277.07 Swiss francs, representing an exchange rate of 2.1313 Swiss francs per dollar, as compared with 2.0438, the rate which netting would yield. The distortion of the effective exchange rate would result entirely from the receivership. The distortion would reap the receivership greater profit, but unfairly leave Bank "A" only an unsecured claim for breach of contracts 5 and 6; these obligations would now have to be covered at the current rate, representing a further loss.

Faced with the possibility of either of these situations, a prudent bank might prefer to limit its exposure, to be liable for its net obligation rather than fully liable on separate transactions, and to reduce the number of required payments. The initial question, however, is how to structure the netting-out agreement, taking into consideration risk, cost, and efficiency. A further question is whether such an agreement would prove enforceable.

**Structuring the Netting Agreement**

The draftsman of an agreement to net out foreign currency obligations has certain basic choices.

- Structure agreements between individual banks or among members of a clearinghouse organization;
- Provide for periodic netting or netting for each value date; or
- Provide for individual contracts for each netting or for a "master" contract incorporating all the separate transactions and providing for their netting.

These choices in various combinations yield several possible approaches.

One approach would be to provide for separate netting agreements between two banks for each value date. Each contract would allow the replacement of the gross amounts of currency about to be due from each party with that party's net obligation. Since there is no obligation to deliver the currency until the value date, if the contracts were regularly drafted and signed after the finish of trading the previous day, the risk of exposure would be greatly lessened. The cost, however, seems substantial, in terms of cumbersome and needless procedures. Legally, such a contract would be an enforceable substituted contract or novation if it clearly provided that the prior obligations were discharged, as discussed later.

**Variations on Netting Out Approaches**

A variation on the first approach would be to rely on periodic—for example, monthly—agreements of the same sort. However, the problem with this variation is such agreements would not cover commitments made for a period shorter than that between contracts. A monthly agreement netting out all prior agreements would not include those currency contracts agreed to during the following month for value dates before the next monthly contract; even a weekly agreement would not include those short-term contracts agreed to in the days immediately following the value date netting. The same weakness would flaw periodic variations of the following approaches as well and thus disqualifies all periodic variations from serious consideration.

The second approach would be to formulate a master contract between two banks. The master contract would provide for netting for each future value date the reciprocal obligations of the parties to deliver the two currencies. Because the obligation to deliver is not ripe before the value date, the netting operation could occur at the completion of trading on the day prior to each value date.

The risk of exposure would be substantially reduced by this approach. In addition, it would be relatively cost-free. Once the master agreement was put into place, ongoing net procedures would be implemented. Such as master contract would be enforceable if sufficiently definite and clearly drawn, as discussed later.

The third approach would be to set up a clearinghouse organization, analogous to those on the commodities futures trading exchanges. Such a clearinghouse would serve as a "middleman" for foreign exchange contracts, assuming the obligations and rights of each party, becoming the recipient of each obligation to deliver and the provider of each obligation to buy. The International Monetary Market operates by "cumulating," or netting, each member's position for each value date. Risk could be moved entirely to clearinghouse members if they would undertake to assure each contract would be performed as clearing members do on the commodities futures exchanges.
However, it would likely be extremely costly to interject such a
mediating structure into foreign exchange transactions. Further, the
commodities futures clearinghouse structure was developed in a
market markedly different from the foreign exchange market, in
which there are standardized contracts, few delivery dates, margin
requirements, and minimal delivery expectations. These differ-
ences would suggest it cannot simply be assumed the development
and use of the clearinghouse structure in futures markets makes it
suitable for use in the foreign exchange market with its various tran-
saction types and its normal expectation of delivery.

Considering the purpose of the proposed agreement along with
the concomitant costs of each possibility, it appears the master con-
tract idea best combines risk minimization and cost avoidance.
While the parties’ exposure would be limited to the net amounts due
under this approach, their continuing agreement would not require
an onerous daily procedure and would entail no substantial cost.

Enforceability of the Agreement

A further question which must be considered with regard to each
suggested type of agreement is whether it can be successfully
challenged. To be usable such a contract must be unassailable. A
contract which replaces the prior obligations to deliver on the
separate contracts with the new obligation to pay the net amounts is
enforceable if it clearly states the parties’ intention to discharge the
prior obligation.

Under New York law, an enforceable substituted contract or
novation must involve a change of terms from the superseded
agreements; this mutual change in terms constitutes the con-
ideration which renders the contract enforceable. Mutual agree-
ment to accept the net liability of the counterparty in place of its gross
liability is such a change in terms. Moreover, under New York
law, the requirement of consideration to support modification has
been superseded by statute, Section 5-1103 of the New York
General Obligations Law requires only that such contract, as modified,
be in writing and signed by the party to be charged.

Contract Theories

To be distinguished is a statement of account, which simply
substitutes the amount due and does not discharge the original
obligation. It is essential to distinguish between payments for
goods and delivery of foreign currency. The latter is delivery of a
commodity and not payment for goods; an agreement to provide the
smaller net amount is a change in the quantity term.

Also to be distinguished from a novation is an accord and satisfac-
tion by which a party agrees to accept a different performance than
originally agreed to but not to discharge the prior obligation until the
new obligation is fully discharged. The draftsman must avoid
confusion by clearly expressing the parties’ intention that the new
contract effectively discharge the superseded prior obligations.

Under the Uniform Commercial Code, as adopted in New York,
the pre-existing duty rule has been eliminated in Section 2-209(1)
which states that “[a]ny agreement modifying a contract within this
Article needs no consideration to be binding.” Therefore, the only
pertinent requirement under Section 2-209 is the Statute of Frauds,
if applicable, must be satisfied. Section 2-201, the Uniform
Commercial Code Statute of Frauds, requires a writing signed by the
party to be charged and containing a quantity term, as discussed
later.

A master contract describing the obligations of both parties in net
terms is quite unobjectionable. The promise of each party to hold the
counterparty liable for only the net currency due is the bargained for
valuable consideration which supports the master contract.

Quantity Term Must Be Definite

The draftsman must be careful the quantity term is sufficiently
definite. Courts have refused to enforce simple contracts and even
requirements or output contracts on the ground the obligation is so
indefinite the promise is ilusory and, therefore, not good considera-
tion. However, language clearly stating the obligation is to
provide the net currency due on a given date should avoid any
such problem.

Under the Uniform Commercial Code requirements of Section 2-
201, a quantity term is expressly required. An agreement to deliver
the net amount due would seem to satisfy the requirement. An
agreement requiring delivery of a net amount is quite definite even
though it cannot be determined until delivery is due.

Although the agreement being structured is not a requirements
contract, since each transaction depends on immediate foreign
exchange market factors and not a party’s requirements, the situation
is similar in that in each, precise quantity cannot be predicted until
some time in the future and in each, the workability of the agreement
depends on the good faith willingness of the parties to maintain an
ongoing relationship. Thus, although the Section 2-306 require-
ments contract standard allowing “actual requirements as may
occur in good faith” does not apply here, the same principle is
nevertheless pertinent.

In addition, the Uniform Commercial Code frequently depends on
commercial custom as a standard by which to gauge a party’s
performance or to interpret an agreement. While the agreement to
net currency balances would be new, the manner in which the
quantities of currency due are arrived at is clear according to well
established trade practices.

The remaining possible method of netting foreign exchange
liabilities is to form a clearinghouse organization. The necessary
agreements there would be among the organization members and the clearinghouse. Such agreements should not be exceptional.

**Bilateral Master Contract Most Workable**

To conclude, then, giving primary consideration to minimization of risk and cost avoidance, the type of agreement to net foreign exchange obligations which seems most workable is the bilateral master contract providing for the daily netting of mutual obligations in the same two currencies. Such an agreement would reduce risk by limiting exposure to the extent possible, but would require neither the interposition of a complex mediating body similar to a complex mediating body similar to a clearinghouse, nor the drafting of daily contracts.

A precisely drawn master contract should prove enforceable under either New York contract law or the New York Uniform Commercial Code. Although the quantity due from each party cannot be made precise before the reckoning for each value date, the agreement should clearly incorporate accepted practices among currency traders. With that background, the quantity embodied in the concept of netting becomes clear and enforcement nonproblematical.

In sum, the parties could find such an arrangement more beneficial than onerous. The more precise structure of the agreement would depend on such factors as the parties' desires to preserve their autonomy or to more closely regulate their commercial exchanges, accounting practices, and the parties' willingness to use modern technology in their relations with each other.
FOOTNOTES

1/ Delivery of foreign currency does not ordinarily require the actual delivery of money; rather, it usually involves the transfer of bank balances.


4/ The Courts, however, have recognized such a right with respect to certain types of contingent contracts, such as leases. Moreover, courts appear to have been reluctant to allow damages against a receiver for exercising the right unless the contract was breached prior to the determination of insolvency. See Federal Deposit Ins. Corp. v. Grelle, 553 F. 2d 258 (2d Cir. 1977); A. cognizant Sav. & Loan Ass'n v. Federal Deposit Ins. Corp., 392 F. 2d 196 (9th Cir. 1968), cert. denied, 393 U.S. 839 (1968); but cf. First Empire Bank v. Federal Deposit Ins. Corp, 572 F. 2d 1361 (9th Cir. 1978), cert. denied, 439 U.S. 919. (FDIC not permitted to reject standby letters of credit of solvent institution simply because obligation contingent). First Empire Bank, however, applies to an obligation where one party has performed, exchange contracts may be different because substantial performance is yet required but not yet due from both parties.

5/ Ms. Ludman telephoned Senior FDIC Attorney, Carroll Shifflett, concerning FDIC practice concerning executory contracts. FDIC practice, as he described it, is consistent with practice under the Bankruptcy Act.

6/ There remains the possibility, as discussed in notes 4-5, supra, that the disaffirming party would assume liability for damages. However, parties attempting to assess risk on foreign exchange contracts should rely on that possibility. Actual recovery from an insolvent estate probably would not be substantial.

7/ Effective use of a periodic netting agreement would require a limitation of value dates.


9/ See generally P. Johnson, Commodities Regulation 97-100. The clearinghouse members function primarily to confirm daily transactions and to make daily settlements under margin requirements as well as to guarantee all transactions.


12/ Some confusion may result from New York terminology which, unlike that of the Restatements, includes substituted contracts in the general category of novations, in the Restatements, novations are substituted contracts involving a new party only and thus a subcategory of substituted contracts.

13/ Farnsworth at 283-84.

14/ See Moors v. Moors, 229 N.Y. 294 (1920) (new reciprocal obligation legally sufficient to make substituted contract binding).

15/ Restatement (Second) of Contracts § 282; see generally Farnsworth at 287; but see Restatement § 422 (statement discharges original obligation).

16/ See National Am. Corp. v. Federal Republic of Nigeria, 448 F. Supp. at 643 (whether agreement an accord or a substituted contract depends upon the parties' intention), see generally Farnsworth at 285-86.

17/ Under N.Y. G.O.L. § 5-701, the Statute of Frauds is probably inapplicable unless the original obligations were within it, under this provision, an agreement need not be in writing unless "by its terms" it "is not to be performed within one year." See Bankers Trust Co. v. Steenburn, 95 Misc. 2d 967, 409 N.Y.S.2d 51 (N.Y. Sup Ct 1978).

18/ Authority for the proposition that foreign exchange transactions fall within the scope of the U.C.C. Article 2 is United Equities Co. v. First Nat'l City Bank, 84 Misc. 2d 441, 374 N.Y.S. 2d 937 (N.Y. Sup. Ct 1975), rev'd, 52 App. Div. 2d 164, 383 N.Y.S. 2d 6 (1976), aff'd on appeal below, 41 N.Y. 2d 1385, 383 N.E.2d 1385, 395 N.Y.S. 2d 640 (1977). These courts assume without discussion a forward contract for the purchase of yen constituted a "transac-
tion in goods" and was thus governed by the U.C.C. Much earlier, however, New York Courts accepted the proposition that foreign exchange is treated as "a commodity bought and sold in the market." Kerr S.S. Co. v. Chartered


20/ Under U.C.C. § 2-204, contract terms generally are sufficiently definite.

21/ See Bankers Trust Co. v. Steenburn, 95 Misc. 2d 967, 409 N.Y.S. 2d 51 (N.Y. Sup. Ct 1978), Regal Fiber Corp v. Anderson Gin Co. 812 F.2d 784 (5th Cir. 1987) ("all the acceptable cotton produced during the crop year 1973 on the following acreage, and none other" acceptable quantity term).

22/ U.C.C. § 1-205(4) and Official Comment 4; U.C.C. § 2-208(2); see generally J. White and R. Summers, Uniform Commercial Code 86, 101-02 (1980).

23/ The same would be true in other jurisdictions, of course, insofar as their contract law, both common law and statutory provisions, is essentially the same as that of New York.

24/ Some likely component of the agreement would be an arrangement under which the parties would confirm the net due each value date by an exchange of letters or telegrams.
BANK'S RISK MANAGEMENT WITH FOREIGN EXCHANGE CUSTOMERS

By Edward R. Dobbins

Banks today use netting procedures in connection with their foreign exchange trading activity primarily to identify, and more effectively control, the risks associated with those transactions.

It is important to consider the risks arising from these transactions and the methods which can be adopted to protect banks from them. The principal risks relate to the uncertainty of treatment of a netting arrangement under federal bankruptcy laws.

Customer Agreements Urged

Thus, the best method to address the problem is for a bank to make an agreement with each customer establishing and defining certain "net" and "gross" limits for trading activity. The agreement also should define the types of contracts, such as "open" or "compensated," in which the parties will engage. Finally, the agreement should clearly specify how netting procedures apply to those transactions. This paper recommends the use of such an agreement.

Some definitions of terms in this paper might be helpful:

- A "compensated contract" is an arrangement consisting of a purchase contract and a sale contract. The terms of each contract should be for an equal amount of the same currency and should mature on the same value date. Compensated contracts should be settled by the bank or company, as applicable, in U.S. dollars of an amount equal to the net difference in the dollar value of the relevant currency at the exchange rate established in each contract.

- A "contract" is a formal agreement with the bank to purchase or sell a specified amount of a named currency at a fixed rate for delivery and payment on a fixed date.

- The "exchange rate" is the price of one currency in relation to another currency at a given time.

- The "Gross Limit" means the maximum amount stated in U.S. dollars which the bank will agree to buy or sell from the company on an Open Contract basis.

- The "Net Limit" is the maximum limit of liability stated in U.S. dollars which the company may be obligated to pay the bank at any time after netting the value of compensated contracts.

- An "open contract" is a contract with the bank which is not offset by a corresponding contract with the bank maturing on the same value date.

- The "value date" is the date on which a foreign exchange transaction is settled by payment and delivery.

It also is important to emphasize this paper deals with bank-to-commercial customer contracts, rather than bank-to-bank arrangements. Since banks are exempt from the bankruptcy laws, the bankruptcy laws, the bankruptcy implications arising from breach of a foreign exchange contract or "fail" will differ. Accordingly, the methods chosen to manage the risks in these situations will no doubt vary.

Current Practices

Occasionally, in connection with foreign exchange trading activities, banks liquidate certain compensated contracts prior to the relevant value date by netting the values of those contracts to determine settlement liability. In such case, the bank and its customer enter a liquidation contract evidencing their understanding to liquidate those contracts.

Such an arrangement is different from netting contracts on a regular and continuing basis as a means of managing exposure and customer trading limits. Under an agreement, a bank would establish a net limit for compensated contracts and gross limit for open contracts. The net limit would represent the maximum net dollar amount of exposure which the bank is willing to assume with respect to that customer on compensated contracts.

Alternatively, the gross limit represents the gross amount which the bank will assume on open contracts with that customer. Compensated contracts should be netted by the bank on a daily basis to determine the outstanding liability of the bank and its customer, and to verify the customer's liability on those contracts is within the net limit.

I understand current limits for compensated contracts and open contracts are calculated by banks on a gross basis rather than on a net basis. The present documentation evidencing these foreign exchange contractual transactions consists solely of advice confirming the terms of the contracts. These transactions are entered into with the customer generally on an unsecured basis. If the terms of these arrangements were evidenced by an agreement which contains, in addition to the provisions discussed, cross default, event of default and security provisions, a bank's position should be improved considerably. The improvement occurs because the agreement allows a bank greater control of the trading relationship and gives that bank a perfected security interest in property of the customer.
Risks Due to Bankruptcy

The most serious risk a bank faces arises when its customer, due to bankruptcy, is unable to perform under the foreign exchange contract. In the event a customer becomes bankrupt, there are certain problems banks should be aware of, since the bank’s ability to recover from the customer under the contracts may be reduced considerably.

- A bankruptcy trustee could challenge the netting arrangement and attempt to collect on contracts on which the bank owed the customer, and reject those contracts on which the customer owed the bank.

- The trustee probably would challenge as preferential transfers any payments or transfers of property occurring within ninety days of the bankruptcy.

- The validity and enforceability of the bank’s security interest in any collateral may be challenged by the trustee as a preferential transfer, and the bank’s rights in that collateral lost.

Accordingly, a number of issues must be considered:

Rejection of Executory Contracts

The principal risk confronted by the bank arises under section 365 of the Bankruptcy Code, which permits a bankruptcy trustee, subject to the court’s approval, to assume or reject any executory contract of the debtor. An executory contract is one which has not yet been completed or fully performed.

The foreign exchange contracts seem to constitute executory contracts and, as a consequence, a trustee may attempt to reject such contracts. Specifically, the trustee may claim to be entitled to reject that contract on which the bankrupt customer owes the bank, and enforce that contract on which the bank is obligated to pay the customer. In effect, the trustee could attempt to unbundle the contracts comprising a compensated contract arrangement.

If the bank bases its trading relationship with the customer in part upon the net limit established—because the bank considers this limit its real exposure to the customer—the bank may find it had improperly managed the risk if the trustee was successful in its rejection of the contracts.

Thus, the worst case situation would arise if the bank had to pay the trustee on one contract, and file a general unsecured creditor claim against that customer for the other contract.

Section 365 also provides that clauses automatically terminating the contract are invalidated by the Bankruptcy Act. The rejection of such contracts constitutes a breach of the contract as of the date immediately preceding the filing of the petition. Accordingly, such claims will be treated as pre-petition claims.

To attempt to defeat such a claim, the bank may argue the contracts making up a compensated contract are so inextricably identified or linked with each other that to separate them and treat each contract separately would frustrate the intention of the parties when they entered the arrangement.

Since the principal terms of each contract, except for the exchange rate, including currency, amount and value date, are identical, a court may be sufficiently persuaded by this argument to allow the netting of those obligations to determine the actual liability of the parties. In addition, if the agreement contained language reflecting this fact, a bankruptcy court may be sufficiently persuaded.

Under the proposed netting arrangement, therefore, unless the bank’s argument is accepted, the claim for payment on the contract against the customer may result in an unsecured general creditor claim.

Preferential Transfer

The Bankruptcy Code (§ 547) authorizes a trustee to invalidate even perfected security interests and to recover payments and other transfers of property to secured creditors and other third parties when made within ninety days, and in some cases, within the year of the filing of the petition.

The rule is intended to establish some arbitrary time prior to bankruptcy within which the debtor should be required to treat equally situated creditors equally. The debtor should not be permitted to pay one particularly favored creditor while failing to pay others.

For a trustee to establish a voidance preference, seven points must be proved:

- There was a transfer,
- the transaction was of the debtor’s property,
- the transfer was to or for the benefit of a creditor,
- the transfer was for or on account of an antecedent debt,
- the transfer was made while the debtor was insolvent,
- the transfer was within 90 days before the original filing of the petition,
- the transfer enabled the creditor to receive more than would have been received under a Chapter 7 liquidation.

Under this section all payments and transfers made within ninety days prior to the filing of the petition are vulnerable to attack.

In analyzing this section, and its applicability to the instant transactions, it is important to keep in mind the section may relate to two aspects of the proposed netting arrangement.
First, it may apply to transactions within ninety days, such as payment occurring after netting. Second, it may apply to transfers to the bank of additional collateral. Thus, it is clear these transactions constitute "transfers of the debtor's property" and "to or for the benefit of the creditor." It should be noted a transfer is deemed to occur in the case of the grant of a security interest at the time of perfection of that interest. Accordingly, in the instant case, if the customer delivers collateral to the bank, perfection will occur when the bank takes possession of the collateral.

The fourth requirement is the transfer must be for or on account of an "antecedent debt."

If the bank gives new value concurrent with the transfer in the form of money, the transfer is not deemed to be made on account of an antecedent debt. It is not clear how much time can pass between the time the debt is incurred and the time of the transfer without the debts being considered antecedent.

New value is defined as:

"money or money's worth in goods, services or new credit, or release by a transferee of property previously transferred to such transferee in a transaction that is neither void nor voidable by the debtor or the trustee under any applicable law, but does not include an obligation substituted for an existing obligation..."

Under this definition it is not clear whether the obligation arising from a netting of contracts constitutes an obligation substituted for an existing obligation. The bank's obligations and customer's obligations on the contracts making up the compensated contract arrangement are discharged and the net liability determined. It is not clear how such an arrangement will be viewed by a bankruptcy court.

If the bank, due to its daily netting of contracts, determines the net limit has been exceeded and demands additional collateral, it is not clear whether this liability of the customer would be considered as new value.

Similarly, since the liability is caused by fluctuations in the value of the relevant currency, it is not clear whether collateral taken at that time would be deemed given for new value.

The sixth requirement also is relevant since transfer must occur within ninety days of the bankruptcy filing. It is important to note only the transfer must occur within ninety days, but the antecedent debt may have arisen earlier.

Secured Status of Bank in Bankruptcy

If collateral is taken by the bank in these cases, it is assumed it will consist generally of government securities, certificates of deposit and cash balances in deposit accounts (collateral).

The bank will perfect its interest in the collateral by taking possession of the collateral. In a bankruptcy, the bank would be confronted with certain procedural matters affecting the collateral. I have discussed the foreseable problems arising from the trustee's assertion of rights to avoid transfers as preferential, or to reject executory contracts. But there are certain problems associated with the protection of the bank's claim as a secured creditor during a bankruptcy proceeding.

If a petition in bankruptcy is filed, there is an automatic stay under § 362(a) which precludes not only the enforcement of any lien or judgment against the debtor or its property, but also the taking of "any act to obtain possession of property of the estate..." (or to collect, assess or recover any pre-petition debt owed by the debtor (Code § 362(a)(3) and (6)). A bank as a creditor also would be prohibited from taking any steps to create, perfect or enforce liens or to effect setoffs (Code § 362(a)(4), (5) and (7)). A stay will be vacated only if the bank, as the principal in the suit, requests such relief. If the debtor is the subject of a reorganization proceeding rather than a liquidation, it may be difficult to obtain relief from the stay because the debtor has equity in the property and that property may be necessary for the reorganization.

Suffice it to say a bank, as a secured creditor, must look to the bankruptcy court for permission to carry out any act regarding the collateral. Code § 362(d)(1) provides that on request of a principal in the suit and after notice and hearing, the court shall terminate, annul, modify or condition the stay "for cause, including the lack of adequate protection of an interest in property of such party in interest." "Sufficient "cause" for vacating the stay may be shown where there is a demonstrated need for relief, such as where the collateral is subject to widely fluctuating price changes.

In the areas of automatic stay, use, sale and lease of collateral and post petition financing, the Code provides for a concept of "adequate protection" of secured creditors. In effect, the court must take into account the interests of the secured creditor and not deprive that creditor of the benefit of the bargain in allowing the debtor to use the collateral or to obtain additional financing.

Section 361 of the Code specifies three methods of providing adequate protection for the interest of a secured creditor. The trustee will generally provide a protection method. If the creditor objects to the proposal, the court will determine the adequacy of the protection.

The concept of adequate protection is derived from the fifth amendment protection of property interests.

The policy grounds and reasoning for this section are based on the theory the secured creditors should not be deprived of the benefit of the bargain. The concept allows for alternative means of protecting the creditor. Suffice it to say, these methods are intended to provide...
adequate protection of the value of a creditor’s interest in the collateral by permitting the trustee to make periodic payments to the creditor, or to provide a replacement lien to protect against any decline in collateral value.

Finally, the court may protect the creditor by granting relief as will result in the realization by the creditor of the “indubitable equivalent” of the creditor’s interest in the collateral. This last method is subject to interpretation by the courts.

**Benefits Of Agreements**

Therefore, it is advisable for banks to consider seriously the use of an agreement governing foreign exchange trading relationships with commercial customers. The use of such agreements should facilitate improved monitoring of this activity.

The agreement should provide to the bank considerably more protection than under present trading conditions. The use of event of default, cross default, and security provisions may provide an early warning to a bank that serious problems have arisen or bankruptcy may be imminent. These provisions may permit a bank to adequately protect its interest by taking appropriate steps prior to the bankruptcy of its customer. Such protection is not available under the present arrangement.

In this connection, it should be noted the terms of the agreement cannot insure protection absolutely. But it is clear that this protection language should increase considerably the likelihood of protection and assist in the avoidance of more dire problems.

Of course a bank remains subject to the same risks arising from a customer bankruptcy as it does today. To the extent trading activity is increased due to the implementation of a netting formula, a bank may be incrementally at risk.

The security taken by a bank should give the bank priority in that collateral, assuming it is given for new value concurrent with the transfer of the customer’s property. Of course, any transfer which occurs within 90 days of the filing of a bankruptcy petition may be challenged by a trustee as a preference.

It is not clear whether a trustee will permit netting and payments to take place rather than exercise its right to reject or enforce contracts with the bankrupt it considers favorable. However, if the bank and its customer have entered an agreement which specifically defines the netting procedure to be followed under the arrangement, the bank’s position should be improved in a bankruptcy situation.
ESTABLISHING A CLEARING HOUSE
FOR THE NETTING OF FOREIGN EXCHANGE CONTRACTS

By Arthur H. Meehan

Recently, the board of directors of the Banker's Association for Foreign Trade approved surveying the U.S. voting membership on the subject of their interest in working towards a system, possibly a clearing house, for the netting of foreign exchange contracts.

The BAFT group has an interest in this issue from the following perspectives:

- The increased perception risks on transactions between banks are increasing, not remaining the same, or declining.

- Given the structure of global markets and the participant base in each of those markets, there are continuing problems of approvals, overlines, and sheer magnitudes of existing facilities. In short, dealing banks tend to have the same counterparties over a broad range of money centers.

- The assumption that the past governs the future is becoming increasingly uncomfortable for more people. The position of the FDIC on the issue of increased market acceptance of risk and the appropriateness of the current insurance premium is germane to the increasing discomfort level.

- The Banco Ambrosiano affair, which in the minds of some people is a continuation of a saga going back many years and including at least the Herstatt and the Israeli Bank affairs and others, points to the possibility that market participants misinterpret provisions of the Basel Agreement.

- Unforeseen ramifications emanating from the almost certain passage of the international lending reform act of 1983, currently under debate in the Congress.

- The discussions now going on in connection with the payments mechanism for the setting of caps for institutions in order to address the increasing concern over the sheer volume and size of the daily settlement, particularly involving CHIPS, and.

- The deep concern emanating from the involvement of the interbank market in current debt restructuring, particularly the Brazilian case.

Netting of foreign exchange contracts is not a new technique and has been used, admittedly sporadically, between a number of institutions over the years to reduce outstandings and to free availability under existing foreign exchange contract guidelines at those institutions. This technique has typically involved compensations extinguishing the contracts and settling the cash differential at some agreed upon discount. An extension of this concept to a broader market would have the effect of reducing the need for ever increasing foreign exchange contract limits for forward transactions as well as reducing the possibility of frequent overlines on such forward exchange facilities.

Intent Of Netting

In addition, should the concept be applied to the spot market, there is a marked possibility for achieving a substantial reduction in the clean risk via the settlement process. It should be noted the netting concept is intended to limit risk, not to stimulate more trading volume which is a concept of some, including members of the BAFT Committee.

Perceived problems with this system surround the cost of its establishment; the legalities in various jurisdictions of extinguishing contracts under all scenarios, and the agreement not only as to the mechanism, but to the discount applied for the premature settlement on a cash basis of forward exchange contracts. It is believed the technology exists, but the stumbling blocks may prove to be costs, ownership of the system and sundry legalities.

A letter will be sent to the U.S. bank voting membership of BAFT shortly to determine the degree of support for this concept.

Should the support be strong, we will proceed to an operating mechanism to study the subject and to recommend an implementation process should agreement be achieved at the study/planning level. Should the membership prove disinterested in this issue, naturally it will die along with numerous other noble notions.
U.S. FOREIGN EXCHANGE MARKET TURNOVER

SUMMARY OF SURVEY

BY

NEW YORK FEDERAL RESERVE
U.S. FOREIGN EXCHANGE MARKET TURNOVER
A Summary of a Survey In April 1983
By the Federal Reserve Bank of New York

Gross foreign currency transactions by 119 banking institutions in the United States foreign exchange market averaged $33.5 billion for the business days in April, according to a survey by the Federal Reserve Bank of New York. Gross transactions arranged by 10 foreign exchange brokers averaged $14.1 billion per day.

The survey of banking institutions contains some duplication since banks reported transactions with each other. But transactions of banks either with nonbank institutions or with banks abroad were not double-counted. After correcting for double-counting in interbank transactions, average daily gross turnover was an estimated $26 billion, an increase of about 44 percent over the March 1980 adjusted figure of $18 billion.

A total of 87 banking institutions participated in both the March 1980 and April 1983 surveys. Altogether these banks reported turnover of $648.2 billion in April, a rise of about 34 percent from the $484.0 billion reported in March 1980.

The 119 banking institutions included in the April 1983 survey had gross turnover of $702.5 billion in April, 43 percent more than the $491.3 billion, or $234 billion a day, reported by 90 banks in March 1980. The 32 additional banks participating in the April 1983 survey contributed $54.3 billion, or about 7.5 percent, of total transactions.

Special Conditions In April


In the United States, April 1983 and March 1980 each had 21 business days. However, several financial centers abroad were closed for the Good Friday and Easter Monday holidays in April 1983, probably reducing reported transactions even though the New York market was open on those days. Turnover in April 1983 also was reduced because European countries moved to daylight saving time in late March, about one month ahead of the United States. Thus, for most business days in April the time when European and U.S. foreign exchange markets were simultaneously open was reduced by one hour. Also, turnover in April 1983 may have been reduced because exchange market participants normally advance some transactions from April into March to adjust balance sheets before the quarter-end.

Broker Survey

Foreign exchange brokers were surveyed separately. Unlike banks, the brokers surveyed do not trade currencies for their own accounts but, instead, act as intermediaries between market participants, mainly banks, wanting to buy or sell currencies. Because the brokers mostly act on behalf of the banks, a large portion of the turnover reported by brokers also was reported in the survey of banking institutions. Within the survey of brokers, there was no double-counting, since brokers do not deal with each other.

About $225 billion, or 56 percent of interbank spot transactions reported by banks for April 1983, was done through brokers, compared with $162 billion, or 54 percent in March 1980. Of all interbank transactions, including swap and forward contracts, reported by banks for April, about $359 billion, or 59 percent, was done through brokers.

The 10 foreign exchange brokers had gross turnover of $295.9 billion in April, up about 66 percent from the $178 billion, or $8.5 billion a day, reported by 11 brokers in March 1980. Nearly all brokers in the United States operating in the foreign exchange market were included in the two surveys.

The results of the survey of brokerage firms showed that 54 percent of the transactions reported by brokers were between two U.S. banks, 41 percent between a U.S. bank and a bank abroad, and 3 percent between two banks abroad, while 1.5 percent of the transactions involved a nonbank counterparty.
The latest survey showed the ranking of foreign currencies by transaction volume at banking institutions has changed considerably since 1980.

Trading in German marks continued to be the most active, accounting for 32.5 percent of the transactions by the banking institutions in spot, forward, swap, and futures contracts. In 1980, 31.7 percent of the activity was in marks.

However, the Japanese yen became the second most actively traded currency, accounting for 22.0 percent of gross turnover. In 1980, the Japanese yen was fourth, accounting for 10.2 percent of turnover. The British pound, which had been the second most actively traded currency in 1980 with a 22.8 percent share, dropped to third place with a 16.6 percent share of total turnover.

The Swiss franc moved into fourth place, accounting for 12.2 percent of activity, from fifth place in 1980 when it accounted for 10.1 percent. The Canadian dollar was fifth with a 7.5 percent share, down from third place in 1980 when its share was 12.3 percent.
At brokerage firms the mark was also the most actively brokered currency, accounting for 30.9 percent of total turnover; the yen was second, accounting for 21.1 percent of total transactions; the British pound was third with 17 percent of transactions; the Canadian dollar was fourth with 11.8 percent, and the Swiss franc was fifth, at 9.6 percent.

For the first time the survey of banks included cross-currency transactions, in which a foreign currency is purchased or sold directly against another foreign currency rather than against the dollar. About 25 percent of the banks reported such transactions which amounted to a total of $1.5 billion equivalent in April 1983.

**Type of Transaction**

During April about 63 percent of foreign exchange trading reported by 119 banks was in spot contracts, generally for delivery in two business days. Another 33 percent of total turnover was in swap contracts, in which a bank simultaneously buys (or sells) a currency for one maturity and sells (or buys) the equivalent amount for a later date.

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**TRADING BY CURRENCY**

*By Brokers*

**TRADING BY TYPE OF TRANSACTION**

*By Banks*
In addition, 4 percent of total transactions was in outright forward contracts, in which currencies are purchased or sold for future delivery. In 1980, about 64 percent of trading was in spot contracts, 30 percent in swap contracts, and 6 percent in outright forward transactions.

One factor which may have contributed to the decline in the relative importance of forward transactions in April 1983 is a reduction by many U.S. corporations in the use of forward contracts to hedge balance sheet exposures. The decline in hedging activity is related to a change in accounting procedures for translating into dollars for consolidation purposes foreign currency items in the balance sheets of U.S. multinational corporations and their subsidiaries.

The new procedures, contained in Financial Accounting Standards Board Statement number 52, require that foreign exchange translation gains or losses be reflected in a separate component of stockholder's equity, rather than in current earnings as was true under the old statement, FASB 8. As a result, many companies have become less concerned than before about hedging balance sheet exposure. The increase in the share of swap transactions between the two surveys may be associated with the rise in exchange market activity in the yen, where swaps normally account for a larger proportion of total transactions than is true for other major foreign currencies.

Almost 12.5 percent of 1983 total volume reported by the 119 banking institutions was with nonbank customers, while the remaining 87.5 percent was reported to have occurred between banks. In 1980, 65 percent of total turnover occurred with nonbank customers. During the
interval between surveys a number of nonbank financial institutions have become more active in foreign exchange. In fact, transactions reported by banks with nonbank financial customers, including arbitrage members of currency futures exchanges, accounted for about 53 percent of total nonbank customer turnover in April 1983, up from about 33 percent in 1980. Thus transactions with nonbank nonfinancial customers as a proportion of total nonbank customer turnover declined to about 47 percent in April from 67 percent three years ago.

About 50 percent of April 1983 customer business took place in the spot market, 32 percent in swap contracts, and 18 percent in the forward market compared with about 36 percent, 21 percent, and 43 percent, respectively, in March 1980. In addition, nearly 4 percent of the trading reported with nonbanks was with arbitrage members of currency futures exchanges, down from 15 percent in 1980.

Arbitraging involves the simultaneous or nearly simultaneous buying and selling of currencies to take advantage of a price differential between the futures exchange and the interbank market. Arbitrage members are a small number of specialists authorized to do only such transactions. However, other exchange members can, and increasingly do, conduct these transactions as well. Thus, the reported decline may not represent an actual reduction in the relative importance of arbitrage activity between the two markets.

Futures, Options Transactions Reported

For the first time banks were asked to report their foreign exchange futures and options transactions executed directly with the organized exchanges.

In a futures contract a bank buys or sells a standardized amount of foreign currency on an organized futures exchange for delivery on one of several standardized future dates. In a foreign exchange options contract a bank buys or sells on an organized options exchange the right—but not the obligation—to receive or deliver a standardized amount of foreign currency at a specified price on or before one of several standardized future dates.

Futures contracts accounted for 0.3 percent of overall foreign exchange turnover in April 1983. Although no options contracts with organized exchanges were reported, a number of banks themselves have written option contracts for their customers. Such transactions were not included in the survey.

Market Concentration

The 10 most active banks accounted for 39.9 percent of transactions in April 1983, up slightly from 39.2 percent in March 1980. Thus foreign exchange activity became somewhat more concentrated even as the number of banks included in the survey increased.

Meanwhile, the share of turnover of foreign banks in the U.S. rose to 43.5 percent in April 1983 from 39 percent in March 1980. The rise coincided with an increase in the proportion of total respondents comprised of foreign banks to 50.4 percent from 46.7 percent three years ago.

The 1983 survey was conducted to determine structural changes in the market since the 1980 survey. A survey was also conducted in 1977.
### Growth in Foreign Exchange Turnover Among U.S. Banks (March 1980 to April 1983)

#### Institutions Represented on Both Surveys vs. All Institutions Represented on Each Survey

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<td>116,995</td>
<td>+4.4</td>
</tr>
<tr>
<td>Swiss Francs</td>
<td>46,682</td>
<td>84,329</td>
<td>+73.2</td>
<td>48,689</td>
<td>85,994</td>
<td>+73.1</td>
</tr>
<tr>
<td>Japanese Yen</td>
<td>40,833</td>
<td>129,238</td>
<td>+186.8</td>
<td>50,068</td>
<td>164,654</td>
<td>+208.9</td>
</tr>
<tr>
<td>Canadian Dollars</td>
<td>58,754</td>
<td>51,666</td>
<td>-13.1</td>
<td>60,541</td>
<td>52,665</td>
<td>-13.0</td>
</tr>
<tr>
<td>French Francs</td>
<td>31,613</td>
<td>28,991</td>
<td>-8.3</td>
<td>33,638</td>
<td>26,830</td>
<td>-8.3</td>
</tr>
<tr>
<td>Dutch Guilders</td>
<td>6,326</td>
<td>9,245</td>
<td>-29.1</td>
<td>9,325</td>
<td>11,194</td>
<td>+20.0</td>
</tr>
<tr>
<td>Belgian Francs</td>
<td>5,113</td>
<td>2,646</td>
<td>-48.2</td>
<td>5,113</td>
<td>2,801</td>
<td>-46.2</td>
</tr>
<tr>
<td>Italian Lira</td>
<td>4,203</td>
<td>5,012</td>
<td>+19.2</td>
<td>4,203</td>
<td>5,560</td>
<td>+32.0</td>
</tr>
<tr>
<td>All Other</td>
<td>10,201</td>
<td>12,523</td>
<td>+22.8</td>
<td>10,794</td>
<td>14,629</td>
<td>+35.5</td>
</tr>
<tr>
<td>Total</td>
<td>483,953</td>
<td>648,185</td>
<td>+33.9</td>
<td>491,323</td>
<td>702,499</td>
<td>+43.0</td>
</tr>
</tbody>
</table>

#### Sample Size
- 87

### List of Banking Institutions and Brokers (Participants in the April, 1983 Survey of The U.S. Foreign Exchange Market)

#### Banks
- Algemene Bank, New York
- American Express International, New York
- American National Bank and Trust, Chicago
- Amsterdam-Rotterdam Bank, New York
- Australia & New Zealand Bkg, Group Ltd, New York
- Banco Commerciale Italiano, Chicago
- Banca Commerciale Italiana, Los Angeles
- Banca Commerciale Italiana, New York
- Banca Di Roma, Chicago
- Bank of America, San Francisco
- Bank of America, Los Angeles
- Bank of America International, Chicago
- Bank of America, New York
- Bank of Montreal, New York
- Bank of New York, New York
- Bank of Toyo, San Francisco
- Bankers Trust Co, New York
- Bankers Trust International Pacific Corp., Los Angeles
- Banque de L'Union Europeenne, New York
- Banque Francaise Du Commerce, New York
- Banque Indosuez, New York Branch
- Banque Nationale De Paris, New York
- Banque Paribas, New York Branch
- Barclays Bank International, New York
- Bayernische Hypotheken-Und Wechselbank, New York
- Bayerische Landesbank Groencentrale, New York
- Berliner Handel-Und Frankfurter, New York
- Brown Brothers Harriman, New York
- Caisse Nationale De Credit Agricole, Chicago
- Chemical Bank, New York
- Citibank International, Chicago
- Citibank International, San Francisco
- Citibank N.A., New York
- Commercial, Detroit
- Commerzbank AG, Chicago
- Commerzbank AG, New York
- Continental Bank International, New York
- Continental Illinois Nat. Bk & Trust Co., Chicago
- Credit Industriel & Commercial, New York
- Credit Lyonnais, New York
- Credit Suisse, New York
- Crocker International Bank, New York
- Crocker National Bank, San Francisco
- Daiwa Bank, New York
- Deutsche Bank AG, New York
- Deutsche Genossenschafts, New York
- Dresdner Bank AG, New York
- European American Banking Co., New York
- The Fidelity Bank, Pennsylvania
- First National Bank of Chicago
- First Chicago Intl, Banking Corp., New York
- First Interstate Bank of California, Los Angeles
- First National Bank of Minneapolis
- First National Bank of Atlanta
- First National Bank of Boston
- First Pennsylvania Bank, Philadelphia
- Fleet National Bank, Providence Rhode Island
- French American Banking Corp., New York
- Fuji Bank, New York
- Geneva Trust and Savings Bank, Chicago
- Gesellschaft fur Wirtschaftsausbau, New York
- Industrial Bank of Japan Ltd, New York
- Interfirst Bank, New York
- Irving Trust Co., New York
- Kreditbank NV, New York
- Lloyd Bank International, New York
- Long Term Credit Bank of Japan, New York
- Manufacturers Hanover Trust Co., New York
- Manufacturers National Bank, Detroit
- Marine Midland Bank, N.A.
- Mellon Bank N.A., Pittsburgh
- Merrill Lynch International Bank, Panama
- Mitsubishi Bank Ltd, New York
- Mitsubishi Bank, Ltd., New York
- Morgen Guaranty Trust Co., New York
- National Bank of Detroit
- National City Bank, Cleveland
- National Westminster, San Francisco

#### Others
- National Westminster Bank Ltd, New York
- Nippon Credit Bank, New York
- Nordic American Bank Corp, New York
- North Carolina National Bank, Charlotte
- Northern Trust Co., Chicago
- Northwestern National Bank of Minnesota
- Rainier National Bank, Seattle
- Republic National Bank of Dallas
- Republic National Bank of New York
- Senwe Bank Ltd. New York
- J. Henry Schroeder Bank and Trust Co., New York
- Seattle First National Bank
- Security Pacific National Bank, Los Angeles
- Shawmut Bank of Boston N.A.
- Societe Generale, New York
- Standard Chartered Bank Ltd, New York
- State Street Bank and Trust Co., Boston
- Sumitomo Bank Ltd, New York
- Swiss Bank Corp., New York
- Texas Commerce Bank N.A., Houston
- Toln Bank Ltd., New York
- Toronto Dominion Bank, New York
- Union Bank of Bavaria, New York
- Union Bank of Switzerland, Chicago
- Union Bank of Switzerland, New York
- Wells Fargo Bank National Corp., New York
- Westdeutsche Landesbank Groencentrale, New York
- Westpac Banking Corp., New York

### Brokers
- Debasuease and Company, Inc., New York
- Harrow Bryan Savage, New York
- Intercurrency Inc., San Francisco
- Mabon, Nogari, Godsell, and Co., New York
- Noonan, Ashley, & Pearce Inc., New York & San Francisco
- P.R. Martin Inc., New York
- Tullet and Taylor Inc., New York and Los Angeles
- Wallich and Matthies Inc., New York
### APRIL 1983 FOREIGN EXCHANGE TURNOVER SURVEY OF 119 BANKING INSTITUTIONS IN THE UNITED STATES

#### Aggregate Results
(In Millions of Dollars Equivalent)

<table>
<thead>
<tr>
<th>CATEGORIES OF TRANSACTIONS</th>
<th>GERMAN MARK</th>
<th>BRITISH POUND</th>
<th>SWISS FRANC</th>
<th>JAPANESE YEN</th>
<th>CANADIAN DOLLAR</th>
<th>FRENCH FRANC</th>
<th>DUTCH Guilder</th>
<th>BELGIAN FRANC</th>
<th>ITALIAN LIRA</th>
<th>ALL OTHER</th>
<th>CURRENCIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. OUTRIGHT SPOT TRANSACTIONS</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>A. INTERBANK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Direct with Banks in U.S.</td>
<td>33,884</td>
<td>13,683</td>
<td>13,289</td>
<td>20,874</td>
<td>2,372</td>
<td>2,627</td>
<td>1,865</td>
<td>160</td>
<td>718</td>
<td>3,817</td>
<td>93,700</td>
</tr>
<tr>
<td>2. Direct with Banks Abroad</td>
<td>25,137</td>
<td>13,861</td>
<td>11,101</td>
<td>11,282</td>
<td>8,578</td>
<td>3,297</td>
<td>1,560</td>
<td>473</td>
<td>688</td>
<td>3,138</td>
<td>81,143</td>
</tr>
<tr>
<td>3. Through Brokers</td>
<td>86,773</td>
<td>37,386</td>
<td>27,900</td>
<td>42,912</td>
<td>11,222</td>
<td>13,322</td>
<td>2,884</td>
<td>572</td>
<td>571</td>
<td>1,402</td>
<td>224,226</td>
</tr>
<tr>
<td>B. CUSTOMER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Financial Institutions</td>
<td>5,732</td>
<td>3,382</td>
<td>4,621</td>
<td>5,102</td>
<td>1,666</td>
<td>362</td>
<td>87</td>
<td>51</td>
<td>97</td>
<td>280</td>
<td>21,439</td>
</tr>
</tbody>
</table>

#### SWAP TRANSACTIONS

| A. INTERBANK               |             |              |             |              |                 |              |              |               |             |           |            |
| 1. Direct with Banks in U.S. | 6,568       | 3,248        | 2,538       | 5,447        | 2,248           | 781          | 584          | 78            | 462         | 898       | 22,628     |
| 2. Direct with Banks Abroad| 13,181      | 7,443        | 6,413       | 13,242       | 9,440           | 2,154        | 1,539        | 587           | 868         | 1,091     | 61,874     |
| 3. Through Brokers         | 38,732      | 21,600       | 10,744      | 38,192       | 12,085          | 6,069        | 1,677        | 448           | 1,486       | 1,230     | 130,309    |
| B. CUSTOMER                |             |              |             |              |                 |              |              |               |             |           |            |
| 1. Non-Financial Institutions| 1,939       | 2,833        | 1,611       | 1,849        | 1,065           | 497          | 116          | 50            | 144         | 281       | 10,108     |
| 2. Financial Institutions  | 3,386       | 3,154        | 2,832       | 5,206        | 2,443           | 273          | 40           | 22            | 48          | 199       | 17,496     |

#### OUTRIGHT FORWARD TRANSACTIONS

| A. INTERBANK               |             |              |             |              |                 |              |              |               |             |           |            |
| 1. Direct with Banks in U.S. | 630         | 818          | 117         | 1,005        | 161             | 129          | 33           | 55            | 110         | 290       | 3,133      |
| 2. Direct with Banks Abroad| 854         | 815          | 380         | 930          | 301             | 90           | 19           | 131           | 214         | 3,678     |            |
| 3. Through Brokers         | 880         | 1,162        | 239         | 1,818        | 202             | 78           | 2            | 68            | 40          | 131       | 4,618      |
| B. CUSTOMER                |             |              |             |              |                 |              |              |               |             |           |            |
| 1. Non-Financial Institutions| 1,892       | 2,685        | 635         | 1,642        | 992             | 346          | 147          | 88            | 177         | 848       | 6,620      |
| 2. Financial Institutions  | 1,283       | 1,323        | 109         | 382          | 366             | 84           | 46           | 31            | 31          | 69        | 3,708      |
| 3. Arbitrage Members of Currency Futures Exchanges | 280 | 418 | 631 | 1,203 | 595 | 22 | 3 | 12 | 3,264 |

#### IV. CURRENCY FUTURES AND OPTIONS

| A. FUTURES CONTRACTS | 447 | 345 | 789 | 291 | 104 | 2 | 1,088 |
| B. OPTIONS CONTRACTS |     |     |     |     |     | 2 | 1,968 |

TOTAL OUTRIGHT SPOT

TOTAL SWAP

TOTAL OUTRIGHT FORWARD

TOTAL FUTURES AND OPTIONS

TOTAL INTERBANK

DIRECT WITH BANKS IN U.S.

DIRECT WITH BANKS ABROAD

THROUGH BROKERS

TOTAL CUSTOMER

CUSTOMER (EXCLUDING ARBITRAGE MEMBERS)

NON-FINANCIAL

FINANCIAL

TOTAL TRANSACTIONS WITH ARBITRAGE MEMBERS PLUS FUTURES & OPTIONS

TOTAL TURNOVER

CROSS-CURRENCY TRANSACTIONS

ADJUSTED TOTAL TURNOVER

CURRENCY SHARE (PERCENT)

## Aggregate Results

(In Millions of Dollars Equivalent)

<table>
<thead>
<tr>
<th>CATEGORIES OF TRANSACTIONS</th>
<th>GERMAN MARK</th>
<th>BRITISH POUND</th>
<th>SWISS FRANC</th>
<th>JAPANESE YEN</th>
<th>CANADIAN DOLLAR</th>
<th>FRENCH FRANC</th>
<th>DUTCH GULDEN</th>
<th>BELGIAN FRANC</th>
<th>ITALIAN LIRA</th>
<th>ALL OTHER</th>
<th>CURRENCIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I OUTRIGHT SPOT TRANSACTIONS</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>A INTERBANK</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Direct with Banks in U.S.</td>
<td>31,937</td>
<td>12,330</td>
<td>12,085</td>
<td>10,848</td>
<td>12,268</td>
<td>1,208</td>
<td>2,431</td>
<td>1,142</td>
<td>148</td>
<td>520</td>
<td>2,171</td>
</tr>
<tr>
<td>2 Direct with Banks Abroad</td>
<td>27,652</td>
<td>15,600</td>
<td>10,932</td>
<td>10,478</td>
<td>8,647</td>
<td>3,076</td>
<td>1,482</td>
<td>1,492</td>
<td>480</td>
<td>560</td>
<td>2,492</td>
</tr>
<tr>
<td>3 Through Brokers</td>
<td>80,628</td>
<td>35,328</td>
<td>26,804</td>
<td>40,399</td>
<td>11,099</td>
<td>12,853</td>
<td>1,907</td>
<td>1,497</td>
<td>586</td>
<td>822</td>
<td>1,391</td>
</tr>
<tr>
<td>B CUSTOMER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Non-Financial Institutions</td>
<td>4,800</td>
<td>3,448</td>
<td>3,441</td>
<td>3,808</td>
<td>3,864</td>
<td>631</td>
<td>466</td>
<td>123</td>
<td>238</td>
<td>823</td>
<td>21,470</td>
</tr>
<tr>
<td>2 Financial Institutions</td>
<td>5,409</td>
<td>3,323</td>
<td>4,786</td>
<td>5,047</td>
<td>1,537</td>
<td>348</td>
<td>97</td>
<td>91</td>
<td>97</td>
<td>220</td>
<td>20,656</td>
</tr>
</tbody>
</table>

## SWAP TRANSACTIONS

| A INTERBANK                |             |               |             |              |                |             |             |              |             |           |            |
| 1 Direct with Banks in U.S. | 6,128       | 3,004         | 2,101       | 4,866        | 2,107          | 706         | 350         | 76           | 428         | 871       | 20,830     |
| 2 Direct with Banks Abroad | 12,300      | 5,486         | 2,544       | 3,230        | 8,118          | 2,040       | 1,894       | 630          | 685         | 1,694     | 46,932     |
| 3 Through Brokers          | 24,410      | 20,726        | 10,911      | 23,816       | 11,831         | 8,821       | 1,400       | 375          | 1,376       | 1,283     | 109,709    |
| 4 Short-Dated Interbank Swaps (one week or less) included in II A 1 through II A 3 | 29,763 | 18,000 | 10,882 | 20,031 | 18,903 | 8,084 | 1,735 | 480 | 1,649 | 1,851 | 95,187 |
| B CUSTOMER                 |             |               |             |              |                |             |             |              |             |           |            |
| 1 Non-Financial Institutions| 1,501       | 2,547         | 1,603       | 1,827        | 1,037          | 337         | 118         | 47           | 144         | 287       | 8,546      |
| 2 Financial Institutions   | 2,983       | 2,111         | 2,679       | 3,284        | 2,443          | 287         | 40          | 22           | 48          | 196       | 16,032     |

## OUTRIGHT FORWARD TRANSACTIONS

| A INTERBANK                |             |               |             |              |                |             |             |              |             |           |            |
| 1 Direct with Banks in U.S. | 814         | 658           | 111         | 898          | 153           | 107         | 28          | 83           | 263         | 2,977     |            |
| 2 Direct with Banks Abroad | 877         | 791           | 241         | 630          | 372           | 87          | 90          | 19           | 67          | 209       | 2,328      |
| 3 Through Brokers          | 886         | 1,162         | 239         | 1,815        | 190           | 78          | 2           | 66           | 32          | 131       | 4,860      |
| B CUSTOMER                 |             |               |             |              |                |             |             |              |             |           |            |
| 1 Non-Financial Institutions| 1,587       | 2,849         | 829         | 1,296        | 950           | 304         | 143         | 87           | 173         | 640       | 8,521      |
| 2 Financial Institutions   | 1,281       | 1,297         | 159         | 314          | 389           | 78          | 48          | 31           | 59          | 99        | 3,919      |
| 3 Arbitrage Members of Currency Futures Exchanges | 280 | 418 | 831 | 1,293 | 598 | 22 | 3 | - | - | 12 | 3,264 |

## CURRENCY FUTURES AND OPTIONS

| A FUTURES CONTRACTS        |             |               |             |              |                |             |             |              |             |           |            |
| B OPTIONS CONTRACTS        |             |               |             |              |                |             |             |              |             |           |            |
| TOTAL OUTRIGHT SPOT        | 109,428     | 66,527        | 50,972      | 72,688       | 25,939         | 19,438      | 8,435       | 1,338        | 1,947       | 7,137     | 420,382    |
| TOTAL SWAP                 | 55,688      | 35,364        | 22,328      | 42,936       | 22,334         | 8,571       | 3,499       | 1,080        | 2,678       | 4,070     | 200,738    |
| TOTAL OUTRIGHT FORWARD     | 8,474       | 8,385         | 2,260       | 8,341        | 2,832          | 881         | 367         | 260          | 287         | 1,514     | 28,695     |
| TOTAL FUTURES AND OPTIONS  | 447         | 348           | 786         | 281          | 104            |             |             |              |             |           |            |

## TOTAL INTERBANK

| DIRECT WITH BANKS IN U.S.  | 194,987     | 96,429        | 69,462      | 112,108      | 40,359         | 27,006      | 8,346       | 2,288        | 4,821       | 10,235    | 564,979    |
| DIRECT WITH BANKS ABROAD   | 38,728      | 18,642        | 18,301      | 25,829       | 8,499          | 3,244       | 1,821       | 277          | 1,018       | 3,096     | 111,790    |
| THROUGH BROKERS            | 40,728      | 21,263        | 18,807      | 20,480       | 11,805         | 5,213       | 3,178       | 999          | 1,332       | 4,895     | 128,079    |

## TOTAL CUSTOMER (EXCLUDING ARBITRAGE MEMBERS)

| NON-FINANCIAL              |             |               |             |              |                |             |             |              |             |           |            |
| FINANCIAL                  |             |               |             |              |                |             |             |              |             |           |            |

## TOTAL TRANSACTIONS WITH ARBITRAGE MEMBERS PLUS FUTURES & OPTIONS

| TOTAL TURNOVER             | 213,045     | 113,461       | 84,328      | 129,238      | 51,065         | 28,891      | 9,245       | 2,545        | 6,012       | 12,523    | 648,883    |

## ADJUSTED TOTAL TURNOVER

<p>| CURRENCY SHARE (PERCENT)   |             |               |             |              |                |             |             |              |             |           |            |
| 32.8                      | 17.5        | 13.0          | 19.8        | 7.9          | 4.8            | 1.6         | 0.4         | 0.8          | 1.9         | 100.0     |            |</p>
<table>
<thead>
<tr>
<th>CATEGORIES OF TRANSACTIONS</th>
<th>GERMAN MARK</th>
<th>BRITISH POUND</th>
<th>SWISS FRANC</th>
<th>JAPANESE YEN</th>
<th>CANADIAN DOLLAR</th>
<th>FRENCH FRANC</th>
<th>DUTCH Guilder</th>
<th>BELGIAN FRANC</th>
<th>ITALIAN Lira</th>
<th>ALL OTHER CURRENCIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. OUTRIGHT SPOT TRANSACTIONS</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. BETWEEN TWO BANKS IN U.S.</td>
<td>30,746</td>
<td>14,182</td>
<td>9,149</td>
<td>19,028</td>
<td>2,589</td>
<td>4,467</td>
<td>1,442</td>
<td>237</td>
<td>502</td>
<td>1,113</td>
</tr>
<tr>
<td>B. BETWEEN TWO BANKS ABROAD</td>
<td>1,173</td>
<td>471</td>
<td>89</td>
<td>256</td>
<td>1,608</td>
<td>130</td>
<td>1</td>
<td>—</td>
<td>1</td>
<td>6</td>
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<tr>
<td>C. BETWEEN A BANK IN U.S. AND A BANK ABROAD</td>
<td>19,846</td>
<td>9,994</td>
<td>5,003</td>
<td>7,722</td>
<td>6,104</td>
<td>4,798</td>
<td>1,064</td>
<td>232</td>
<td>324</td>
<td>684</td>
</tr>
<tr>
<td>D. INVOLVING A NON-BANK COUNTERPARTY</td>
<td>438</td>
<td>360</td>
<td>1,250</td>
<td>863</td>
<td>128</td>
<td>3</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3</td>
</tr>
<tr>
<td>II. SWAP TRANSACTIONS</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. BETWEEN TWO BANKS IN U.S.</td>
<td>20,848</td>
<td>11,838</td>
<td>8,500</td>
<td>21,226</td>
<td>3,462</td>
<td>3,220</td>
<td>600</td>
<td>188</td>
<td>977</td>
<td>1,046</td>
</tr>
<tr>
<td>B. BETWEEN TWO BANKS ABROAD</td>
<td>314</td>
<td>249</td>
<td>137</td>
<td>159</td>
<td>4,582</td>
<td>131</td>
<td>—</td>
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<tr>
<td>C. BETWEEN A BANK IN U.S. AND A BANK ABROAD</td>
<td>11,826</td>
<td>11,935</td>
<td>6,978</td>
<td>12,744</td>
<td>16,888</td>
<td>4,140</td>
<td>1,388</td>
<td>578</td>
<td>503</td>
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<td>D. INVOLVING A NON-BANK COUNTERPARTY</td>
<td>24</td>
<td>840</td>
<td>264</td>
<td>582</td>
<td>482</td>
<td>—</td>
<td>14</td>
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<td>E. SHORT-DATED SWAPS (ONE WEEK OR LESS) INCLUDED IN I. THROUGH II.</td>
<td>19,303</td>
<td>12,776</td>
<td>8,848</td>
<td>19,729</td>
<td>16,888</td>
<td>8,828</td>
<td>392</td>
<td>828</td>
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<td>III. OUTRIGHT FORWARD TRANSACTIONS</td>
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<td>A. BETWEEN TWO BANKS IN U.S.</td>
<td>198</td>
<td>122</td>
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<td>131</td>
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<td>B. BETWEEN TWO BANKS ABROAD</td>
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<td>70</td>
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<td>—</td>
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<td>C. BETWEEN A BANK IN U.S. AND A BANK ABROAD</td>
<td>36</td>
<td>872</td>
<td>13</td>
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<td>62</td>
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<td>D. INVOLVING A NON-BANK COUNTERPARTY</td>
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<td>—</td>
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<td>17</td>
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<td>15,471</td>
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<td>62,516</td>
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<td>4,489</td>
<td>1,239</td>
<td>2,307</td>
<td>3,409</td>
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<tr>
<td>ADJUSTED TOTAL CURRENCY</td>
<td>91,644</td>
<td>60,275</td>
<td>28,364</td>
<td>62,516</td>
<td>35,080</td>
<td>16,925</td>
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<td>2,307</td>
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<td>1.6</td>
<td>0.4</td>
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OTHER DOCUMENTS OF

THE COMMITTEE
Document of Organization

CONCLUSION OF FEASIBILITY STUDY TO ESTABLISH FOREIGN EXCHANGE COMMITTEE

(June 1978)

It was generally agreed that any new forum for discussing matters of mutual concern in the foreign exchange market (and where appropriate offshore deposit markets) should be organized as an independent body under sponsorship of the Federal Reserve Bank of New York. Such a Committee should:

1. be representative of institutions participating in the market rather than individuals,
2. be composed of individuals with a broad knowledge of the foreign exchange markets and in a position to speak for their respective institutions,
3. have sufficient stature in the market to engender respect for its views, even though the Committee would have no enforcement authority;
4. be constituted in such a manner as to ensure at all times fair presentation and consideration of all points of view and interests in the market, and
5. notwithstanding the need for representation of all interests, be small enough to deal effectively with issues that come before this group.

The objectives of the Committee would be

To provide a forum for discussing technical issues in the foreign exchange market, as well as the related international money markets.

To serve as a channel of information between the market and the Federal Reserve and, possibly, other official institutions within the United States and abroad.

It is understood that the Committee would seek to work closely with the FOREX Association of North America (FANA)

The Committee may consider the possibility of formulating recommendations for uniform terminology and technical standards for use in the foreign exchange market. It will not concern itself with the evaluation of individual market participants, nor will it attempt to set requirements, qualifications, or terms for participation in the market.

The Committee

In response to the results of the study, the Federal Reserve Bank of New York agreed to sponsor the establishment of a Foreign Exchange Committee. It was agreed that

1. The Committee should consist of no more than 14 members and an equal number of alternates. In addition, the President of FANA would be invited to participate.
2. Institutions participating in the Committee should be chosen in consideration of their participation in the exchange market here as well as of the size and general importance of the institution. Selection of participants should remain flexible to reflect changes as they occur in the foreign exchange market.
3. Responsibility for choosing member institutions and alternates rests with the Federal Reserve Bank of New York. The Federal Reserve may solicit the advice of current Committee members.
4. Initially, the terms of half of the members will be for two years and half for three. Thereafter, to provide for maximum participation in the Committee by institutions eligible for membership, the term of membership would be two years. It is envisaged that, at the expiration of each member’s term, the alternate would succeed to full membership.

The composition of the Committee should be as follows.

5-6 East Coast banks (possibly including one New York Edge Act corporation)
2-3 regional banks
2-3 foreign banks
1-2 brokers (preferably to represent both foreign exchange and Euro-depositors)

the president of the FOREX Association of North America

the Federal Reserve Bank of New York

Committee Procedures

At the outset, there would be a meeting of the Committee — with a specified agenda of items — at least every alternate month (January, March, May, July, September, November). The format of the discussion, however, would be informal.

In the event that a member is unable to attend a meeting, his alternate may attend.

Any recommendation the Committee wishes to make on items coming to its attention can be discussed and decided upon only at its meetings. Any such recommendation would be distributed not only to member institutions and their alternates, but to every senior officer in charge of the international money desks of every participating institution in the United States.

The Committee may designate ad hoc working groups to focus on specific issues.

Depending on the agenda of items to be discussed, the Committee may choose to invite other institutions to participate in its discussions and deliberations.

Summaries of discussions at each meeting would be prepared and distributed to market participants generally by the Federal Reserve Bank of New York on behalf of the Committee.

Meetings of the Committee would be held at the Federal Reserve Bank of New York.

In addition to the meetings provided for above, a meeting of the Committee may be requested at any time by two or more members.
FOREIGN EXCHANGE COMMITTEE MEMBERS AND ALTERNATES
(January, 1984)

I. East Coast Banks

<table>
<thead>
<tr>
<th>MEMBERS</th>
<th>ALTERNATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolf G. Selge, Senior Vice President</td>
<td>Heinz Riehl, Senior Vice President</td>
</tr>
<tr>
<td>Morgan Guaranty Trust Company</td>
<td>23 Wall Street</td>
</tr>
<tr>
<td>New York, N. Y. 10015</td>
<td>New York, N. Y. 10043</td>
</tr>
<tr>
<td>(212) 485-5025</td>
<td>(212) 559-0864</td>
</tr>
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<table>
<thead>
<tr>
<th>MEMBERS</th>
<th>ALTERNATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juergen Wendland, Senior Vice President</td>
<td>James P. Borden, Senior Vice President</td>
</tr>
<tr>
<td>Bankers Trust Company</td>
<td>The Chase Manhattan Bank</td>
</tr>
<tr>
<td>New York, N. Y. 10015</td>
<td>One Chase Manhattan Plaza</td>
</tr>
<tr>
<td>New York, N. Y. 10081</td>
<td>New York, N. Y. 10005</td>
</tr>
<tr>
<td>(212) 775-3375</td>
<td>(212) 552-7543</td>
</tr>
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<table>
<thead>
<tr>
<th>MEMBERS</th>
<th>ALTERNATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horst Duseberg, Executive Vice President</td>
<td>S. Warte Rawls III, Senior Vice President</td>
</tr>
<tr>
<td>European-American Bank and Trust Co.</td>
<td>Chemical Bank</td>
</tr>
<tr>
<td>77 Water Street</td>
<td>20 Pine Street</td>
</tr>
<tr>
<td>New York, N. Y. 10015</td>
<td>New York, N. Y. 10005</td>
</tr>
<tr>
<td>(212) 437-4561</td>
<td>(212) 770-4015</td>
</tr>
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<thead>
<tr>
<th>MEMBERS</th>
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</tr>
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<tbody>
<tr>
<td>Thomas Berman, Senior Vice President</td>
<td>Timothy E. Summerfield, Vice President</td>
</tr>
<tr>
<td>Crocker National Bank</td>
<td>Commercial Bank</td>
</tr>
<tr>
<td>239 Park Avenue</td>
<td>520 Madison Avenue</td>
</tr>
<tr>
<td>New York, N. Y. 10017</td>
<td>New York, N. Y. 10020</td>
</tr>
<tr>
<td>(212) 702-3726</td>
<td>(212) 688-7261</td>
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<table>
<thead>
<tr>
<th>MEMBERS</th>
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<tbody>
<tr>
<td>Ron Levy, Senior Vice President</td>
<td>John Christopherson, Vice President and</td>
</tr>
<tr>
<td>Manufacturers Bank</td>
<td>Foreign Exchange Manager</td>
</tr>
<tr>
<td>140 Broadway</td>
<td>Bank of New York</td>
</tr>
<tr>
<td>New York, N. Y. 10015</td>
<td>48 Wall Street</td>
</tr>
<tr>
<td>(212) 440-5718</td>
<td>(212) 530-3549</td>
</tr>
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<table>
<thead>
<tr>
<th>MEMBERS</th>
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<tbody>
<tr>
<td>Peter J. Niasl, Senior Vice President</td>
<td>William Rappolt, Senior Vice President</td>
</tr>
<tr>
<td>Shawmut Bank of Boston</td>
<td>Trading Manager</td>
</tr>
<tr>
<td>One Federal Street</td>
<td>The Fidelity Bank</td>
</tr>
<tr>
<td>Boston, MA 02211</td>
<td>Broad and Walnut Streets</td>
</tr>
<tr>
<td>(617) 292-2343</td>
<td>Philadelphia, Penn 19109</td>
</tr>
<tr>
<td></td>
<td>(215) 943-0923</td>
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II. Regional Banks

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<tr>
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<tbody>
<tr>
<td>Robert Geier, Senior Vice President</td>
<td>Timothy Gallagher, Senior Vice President</td>
</tr>
<tr>
<td>Harris Trust and Savings Bank</td>
<td>First National Bank of Chicago</td>
</tr>
<tr>
<td>111 West Monroe Street</td>
<td>One First National Plaza</td>
</tr>
<tr>
<td>Chicago, IL 60606</td>
<td>Chicago, Illinois 60670</td>
</tr>
<tr>
<td>(312) 611-3386</td>
<td>(312) 732-5368</td>
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<table>
<thead>
<tr>
<th>MEMBERS</th>
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<tbody>
<tr>
<td>Raymond R. Peters, Group Vice President</td>
<td>Robert LeBlanc, Senior Vice President</td>
</tr>
<tr>
<td>Bank of America, N &amp; S A</td>
<td>Security Pacific National Bank</td>
</tr>
<tr>
<td>Flow of Funds Management</td>
<td>International Banking Group</td>
</tr>
<tr>
<td>No 3170</td>
<td>333 South Hope Street</td>
</tr>
<tr>
<td>P.O. Box 37000</td>
<td>Los Angeles, CA 90071</td>
</tr>
<tr>
<td>San Francisco, CA 94137</td>
<td>(213) 613-5757</td>
</tr>
<tr>
<td>(415) 953-9374</td>
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III. Foreign Bank

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Christine Patton, First Vice President</td>
<td>Christopher Pavlou, Senior Vice President</td>
</tr>
<tr>
<td>Credit Lyonnais</td>
<td>Barclays Bank International</td>
</tr>
<tr>
<td>95 Wall Street</td>
<td>100 Water Street</td>
</tr>
<tr>
<td>New York, N.Y. 10005</td>
<td>New York, N. Y. 10005</td>
</tr>
<tr>
<td>(212) 344-0500</td>
<td>(212) 530-0103</td>
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<table>
<thead>
<tr>
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<tr>
<td>Hans Nauckmann, Senior Vice President</td>
<td>Mr. Gerhard Stayskel, Vice President and Treasurer</td>
</tr>
<tr>
<td>Credit Suisse</td>
<td>Deutsche Bank</td>
</tr>
<tr>
<td>100 Wall Street</td>
<td>9 West 57 Street</td>
</tr>
<tr>
<td>New York, N.Y. 10005</td>
<td>New York, N. Y. 10019</td>
</tr>
<tr>
<td>(212) 422-1450 ext. 595</td>
<td>(212) 940-8040</td>
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<tr>
<th>MEMBERS</th>
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<tr>
<td>Terry Joyce, Agent, Foreign Exchange</td>
<td>Yoshishige Nagaya, Deputy General Manager</td>
</tr>
<tr>
<td>The Toronto-Dominion Bank</td>
<td>The Bank of Tokyo Ltd</td>
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<tr>
<td>45 Wall Street</td>
<td>New York Agency</td>
</tr>
<tr>
<td>New York, N.Y. 10005</td>
<td>100 Broadway</td>
</tr>
<tr>
<td>(212) 820-2105</td>
<td>New York, N.Y. 10005</td>
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<tr>
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<td>(212) 766-3432</td>
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IV. Brokers

<table>
<thead>
<tr>
<th>MEMBERS</th>
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<tbody>
<tr>
<td>Philip D'Angelo, President</td>
<td>Stephen E. Moore, Senior Executive Vice President</td>
</tr>
<tr>
<td>Noonan, Asley and Peace Inc</td>
<td>Lesser Marshall, Inc</td>
</tr>
<tr>
<td>Wall Street Plaza</td>
<td>76 William Street</td>
</tr>
<tr>
<td>New York, N.Y. 10005</td>
<td>New York, N.Y. 10005</td>
</tr>
<tr>
<td>(212) 485-8297</td>
<td>(212) 943-0943</td>
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<tr>
<td>Alan Griffiths, President</td>
<td>Richard M. McGee, Managing Director</td>
</tr>
<tr>
<td>Tarbaum, Inc</td>
<td>Tulfert and Riley</td>
</tr>
<tr>
<td>One Whitehall Street</td>
<td>80 Pine Street</td>
</tr>
<tr>
<td>New York, N.Y. 10005</td>
<td>New York, N.Y. 10005</td>
</tr>
<tr>
<td>(212) 363-8600</td>
<td>(212) 208-2006</td>
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V. Forex Assn. of North America

<table>
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<tr>
<th>MEMBERS</th>
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<tbody>
<tr>
<td>David Palmer, Senior Vice President and Treasurer</td>
<td>First American Bank of New York</td>
</tr>
<tr>
<td>350 Park Avenue</td>
<td>New York, N.Y. 10022</td>
</tr>
<tr>
<td></td>
<td>(212) 759-9898 ext. 752</td>
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VI. Federal Reserve Bank of New York (ex officio)

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<thead>
<tr>
<th>MEMBERS</th>
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<tbody>
<tr>
<td>Sam Y. Cross, Executive Vice President</td>
<td>Margaret L. Greene, Senior Vice President</td>
</tr>
<tr>
<td>Federal Reserve Bank of New York</td>
<td>Federal Reserve Bank of New York</td>
</tr>
<tr>
<td>33 Liberty Street</td>
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</tr>
<tr>
<td>New York, N.Y. 10045</td>
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</tr>
<tr>
<td>(212) 791-6160</td>
<td>(212) 791-5688</td>
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CUMULATIVE INDEX

TO

PREVIOUS REPORTS
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<td>Chairman's Report</td>
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<td>Committee's Advisory Role</td>
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<td>Committee's Relationships with Other Organizations</td>
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<td>1979</td>
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