THE FOREIGN EXCHANGE COMMITTEE

ANNUAL REPORT

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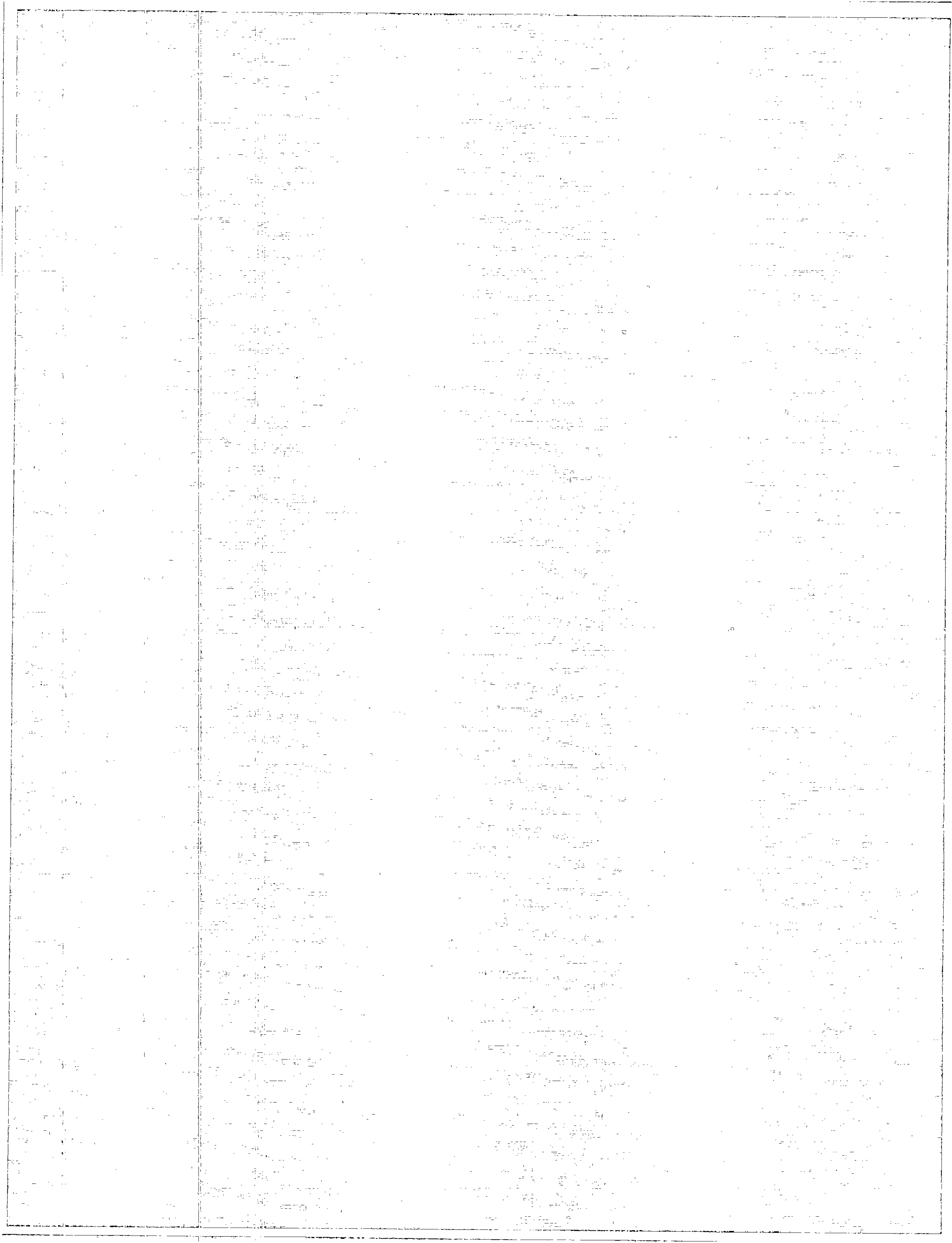

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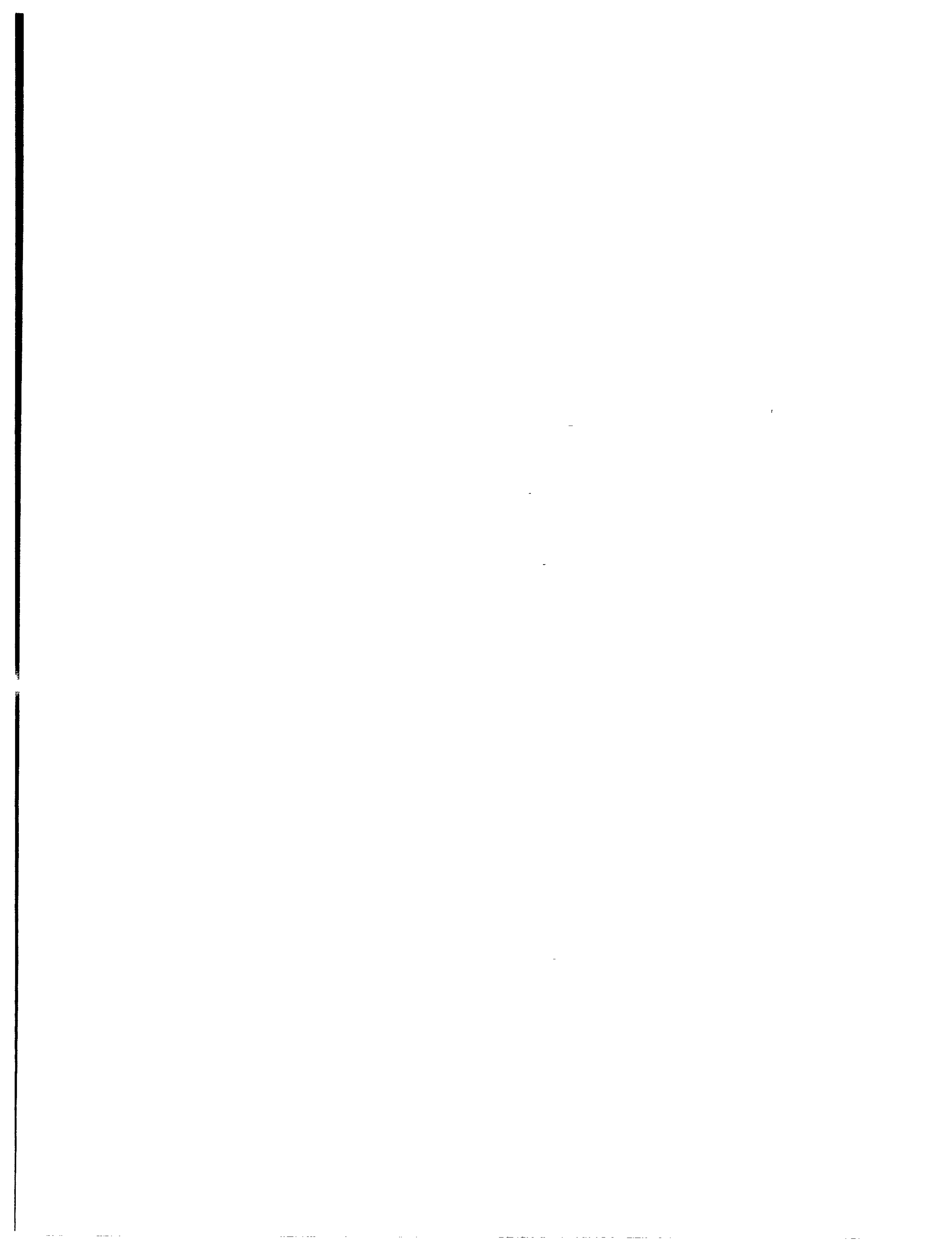


CHAIRMAN'S REPORT

There has always been an appreciation of the need to work together to preserve and enhance the integrity of the market. But in 1989, developments in financial markets produced a renewed sense of responsibility within the foreign exchange community in the United States. Following revelations of possible improprieties in some other markets, the foreign exchange trading community assumed a greater responsibility for fostering those forces considered to be healthy, and reducing those pressures seen to be debilitating.

The Foreign Exchange Committee played a role in this process. With members having a heightened awareness of risks, the Committee found itself moving more forcefully than in the past. The Committee, in accordance with its charter, does not attempt to issue rules and regulations. Rather, the Committee recognizes that the force of its recommendations is dependent on the persuasiveness of its suggestions and on the Committee's ability to convey its views effectively, working with all members of the market.

The Committee's actions concerning market practice in the brokered foreign exchange market is one example of the more forceful postures the Committee adopted this year. On the issue of "points banking" the Committee made a concerted effort to provide intellectual leadership, reaching out to the community at large and having extensive discussions on this issue. The Committee saw this as an issue that touches on many of the basic ways of doing business in the foreign exchange market, and could not condone ongoing pratices that jeopardize the integrity of the market.

In other ways, the Committee responded to a broadening of a sense of its responsibility. It launched an initiative to publish periodically data on foreign currency option volatility in order to assist in dealing with the problems encountered in evaluating exposures. It continued to review and disseminate papers on risks encountered in dealing in foreign exchange and related markets. It took on a commitment to consider whether the institutional arrangements here in the United States are adequate to meet the changing needs of the foreign exchange community.

In addition, it acted to expand its membership, effective in 1990. In order to reflect the growth and changing structure of the foreign exchange market in the United States, the Committee decided to increase representation of foreign banks and to add, for the first time, representatives from the investment banking community. The Committee is proud of its achievements, of the conscientiousness of its members and of the industry, and of the cooperation between the Federal Reserve Bank and marketplace on these matters.

Christine W. Patton

ISSUES PERTAINING TO MARKET PRACTICE AND CONTROL OF RISK

TRANSACTIONS IN THE BROKERED FOREIGN EXCHANGE MARKET

The Committee continued to pursue its review of bank relationships with foreign exchange brokers, particularly in regard to the use of points. The practice of points developed in response to difficulties that may arise in the brokered market for foreign exchange when a dealer discovers that a transaction he thought he had agreed to was not consummated by the broker at the agreed price. Failure to complete a transaction may occur for a variety of reasons — a misunderstanding, cancellation of the price, an unacceptable name for the counterparty, or an insufficient amount being presented to cover dealers' desired transactions. Certain practices used in the past to resolve such differences and disputed trades in the brokered foreign exchange market appeared to be unsafe and, depending on the circumstances, may have represented a violation of Federal law. The Committee became increasingly concerned about the use of points and endeavored to develop recommendations for acceptable solutions to the problem of settling differences.

Committee's Longstanding Concern About Points

The Committee established a Task Force during 1988, consisting of representatives of bank management, bank dealers, and brokers, to analyze various dimensions of the problem. In December 1988 the Task Force issued a report recommending that efforts should be directed toward reducing the frequency of situations giving rise to points and that periodic settlement by cash payment (or brokerage fee adjustment) was an acceptable compensation mechanism for resolving disputes. The Task Force members remained divided in their efforts to identify the boundaries of acceptable market practice; however, there was agreement that, if any points transactions were still executed, there should be full documentation. (See 1988 Annual Report, p.24, for a summary of the Task Force deliberations.)

Committee's Actions on Points During 1989

After considering the findings of the Task Force, the Committee decided that more far-reaching solutions to the points issue were needed. It concluded that market conventions needed to be changed so as to provide for alternative mechanisms for settling such differences without the use of points. Its recommendations were based on two fundamental premises:

- **Dealers are responsible for quoting prices at which they are willing to deal and are expected to be prepared to transact a reasonable amount with an acceptable counterparty at that price until the dealer changes or cancels his price. The ability of an individual dealer to assume a position in foreign exchange, subject to his management's policies and guidelines, supports this price-quoting function of dealers.**

- **Brokers are intermediaries whose principal function is to bring acceptable counterparties together at prices agreeable to both. Brokers' ability to provide dealers with credible and impartial service requires that market convention not force brokers to consent to assume positions in foreign exchange or to provide incentives for brokers to favor some dealers at the expense of others.**

The Practice of Points Is Not An Acceptable Market Convention

These premises suggested to the Committee that no institution should exist in the foreign exchange markets that permits brokers to assume positions or dealers to force positions on to brokers. Committee members, therefore, also rejected proposals that some market participants had put forward in an effort to address some of the most flagrant problems with points — namely to establish a system of points on a recorded basis. The Committee believed that any system of points, even a recorded system, was not consistent with clear, sound principles that should guide market behavior. It felt that the mechanisms needed to monitor a recorded system of points would be more cumbersome and burdensome than could possibly be justified by any benefit of keeping a points system. It noted that such a monitoring system must be supplemented with a mechanism for evaluating the acceptability of all kinds of actual situations and/or disputes that might arise. And it saw no institution in the United States in a position to be able, or even willing, to take on this unrewarding task.

The Committee was far more comfortable setting out general guidelines that it felt made sense for the foreign exchange market and hoped other institutions operating in the United States market could ascribe to. In a letter to all market participants dated March 23, 1989, the Committee

reiterated the importance of eliminating the need for a points system of any kind. It supported the principle that situations that involve payment of compensation between banks and brokers should be addressed in ways that provide for: (1) full documentation, (2) management review, and (3) cash settlement. (See p. 15 of this report.)

The Committee recognized that, to be consistent with the above-stated objective, the market convention for quoting exchange rates by brokers would have to be altered so that brokers would **not** be required to substantiate prices until changed or cancelled. Committee members noted that, in practice, prices were not always firm. Many dealers already recognized that the brokers at times cannot satisfy all desired transactions at the indicated price and they accept, instead, the next available price. The Committee believed all market participants would be better served if dealers were to avoid "stuffing" brokers.

Specifically, the Committee wrote that:

- **Bank management should establish clear policies against their dealers forcing brokers to accept transactions in which a counterparty has withdrawn its interest before the trade could be consummated ("stuffing") and to encourage the understanding that brokers are not required to substantiate prices.**
- **Brokerage firms should establish clear policies prohibiting position-taking by brokers and requiring that any position that may be unintentionally assumed be closed out at the earliest practical time.**

The Committee believes that if the above policies were adopted, the major factor giving rise to points would be eliminated. The only remaining causes of disputed trades would be mistakes, misunderstandings, etc.

Meanwhile, an episode in one of the foreign exchange markets abroad drew attention to a kind of abuse of the points system that had not previously been considered in the Committee's discussions. Specifically, this episode revealed that, in a world where banks now frequently provide foreign exchange service to individuals on a collateralized basis, it becomes possible for individual brokers without their management's knowledge to establish margin accounts for themselves. The individual broker may then be able to obtain cash payments equivalent to the value of points that otherwise would accrue to the brokerage firm. To the extent that individuals realize the gain of points, any justification for the practice — on the grounds that it may provide liquidity for the marketplace as a whole and socialize the costs of providing dealers with firm prices — is undermined. As managements of brokerage firms became aware of the potential for this kind of abuse, they became more willing to see the points practice disappear.

Market Perceptions About the Use of Points Have Changed

During the course of the year, the foreign exchange community as a whole appeared to become more aware of the issues presented by the use of points. Market participants indicated to the Committee that perceptions about the use of points had changed. The frequency of "stuffs" had decreased, and the aggregate amount of points outstanding had declined significantly without any apparent decline in liquidity as a direct result of the decline in points transactions. The Committee also received reports suggesting significant improvement in the banker/broker relationships, particularly at the senior management level. The Committee circulated a follow-up letter to financial institutions on November 3, 1989, to share with the foreign exchange community its impressions of these recent changes as well as to emphasize the Committee's position that the practice of points in any form was no longer an acceptable market convention. (See p. 23.)

Notwithstanding these developments, the Committee indicated to the Federal Reserve Bank that it would welcome bank supervisors taking regulatory actions to curb banks' use of points.

Meanwhile, Forex USA, Inc., had organized a panel discussion on the issue of points as part of its November 9-11 Senior Dealers' Conference. A representative of the Federal Reserve Bank of New York explained the grave concerns that the central bank has about the practice of points as well as described the collaborative process by which the Committee's recommendations had been reached. The speaker commended the process whereby the bringing together of market practitioners and the Federal Reserve, as was done through the Committee and its Task Force, provided for a blending of perspectives and an effective mechanism to improve market practice. The Committee had provided a forum to which the Federal Reserve could convey its concerns. The Foreign Exchange Committee also served to develop a market-generated solution that was both responsive to the concerns of the Federal Reserve and sensitive to the needs of the dealing community. (See p. 18.)

During the following week in Paris, the Association Cambiste Internationale (A.C.I.) Council approved the following statement, recommended by the Committee on Professionalism (CPF), concerning the practice of points in the brokered foreign exchange market:

The CPF has come to the conclusion that it is **not in favor of the settlement of differences by points**, but recognizes that in those financial centers where the regulatory authority controls **all** the participants in that market this practice, properly regulated by the appropriate authority, is acceptable.

British Dual System

Meanwhile, important changes were unfolding in the London foreign exchange market with the development of arrangements for the establishment of a dual broking system. The Bank of England had become concerned, among other things, that the way brokers discharge their points obligations might undermine the relationship of the broker *vis-a-vis* the broker's clients. This could occur either because: 1) the broker's interest might conflict with that of his client or 2) the broker used his position as an intermediary to obtain a secret profit or benefit.

Early in the year the Bank of England informed all foreign exchange dealers in London that the existing, informal use of points in the London market was unacceptable. During March 1989 the Bank of England sought the views of all active foreign exchange market participants in determining whether they wished to see the current "points" practice, with tighter management controls and stronger legal footing, perpetuated in order to maintain firm prices; or whether banks preferred to abolish "points" and accept the consequences which might flow from this. These enquiries established that opinion in London was divided. The Bank of England, working with industry representatives, responded by devising a scheme to allow those institutions wishing to retain the use of points to do so, while ensuring that points would not be used in deals with banks which reject the system.

In October 1989, broking firms in London approached all individual banking institutions they service to determine which banks were willing to acknowledge in writing that they consented to the brokerage firms being entitled to earn points from the bank on foreign exchange deals without further disclosure. Only these banks would participate in the points system being established in London. The new arrangements were to be effective February 1, 1990.

Questions arose in Foreign Exchange Committee discussions about the implications for the U.S. foreign exchange market participants of these developments. In particular, the questions were: 1) Should a U.S. market participant that has a policy of not permitting its dealers to use points here participate in the points system in London to the extent that it conducts deals through London brokers? 2) Should branches and agencies of such a bank, operating outside of the United States, participate in the points system to the extent that the branches and agencies deal through London brokers?

The Committee concluded, in a letter circulated among its members on December 5, 1989, that the arrangements being established in London for banks to participate in the points system there are "**not** consistent with the Committee's recommendations with respect to sound market practice in the U.S. foreign exchange market. This is because, if a bank in the United States or a foreign branch of a U.S. bank were to agree to participate on whatever basis, that action alone would signify agreement to the perpetuation of the points system and acceptance of its consequences." (This letter is reprinted on p. 23.)

FOREIGN CURRENCY OPTIONS VOLATILITY PROJECT

During 1989 the Committee laid the groundwork for establishing an independent source of market-generated options valuation information. And in early 1990, the efforts of the past year bore fruit with the publication of a new monthly statistical release entitled "Implied Volatility Rates for Foreign Currency Options."

Beginning in late 1988 the Committee had set out to analyze ways in which it might provide useful assistance in dealing with some of the problems encountered in evaluating foreign currency options exposures. The Committee concluded that an independent source for implied volatility rates would facilitate and strengthen the auditing and management control functions of options market participants. That is, the Committee felt that reference rates for the implied volatilities of a core group of foreign currency options could provide management, auditors, and examiners (supervisors) with a useful basis of comparison for the valuations used by an institution.

The Committee further concluded that survey ranges of implied volatility rates, bid and asked, for "at-the-money" options would be the most useful benchmarks. It was decided also that the project should cover eight of the most actively traded foreign currency options, for various maturities from 1 month to 3 years. The feasibility of this approach was tested by trial surveys during February 1989.

The Committee asked the Federal Reserve Bank of New York to undertake the collection and processing of the quotes,

and the publication of the reference rates. The Bank agreed after determining that participating in the project would be both proper and useful. The Committee will remain responsible for administering the project, including the selection of the institutions that will serve on the panel providing quotes.

A background paper with more details about the project is reprinted on p. 24 of this Annual Report.

COUNTERPARTY CREDIT RISK ON FORWARD CONTRACTS

As in the past, the Committee continued to focus on recognizing and managing the risk exposures associated with a foreign exchange trading operation. There have been significant advances in the evaluation and control of credit risk since the Committee considered an informational document in 1983, entitled "Credit Risks in the Foreign Exchange Business" by Heinz Riehl, that suggested techniques for measuring and limiting credit risk. The 1983 document described the establishment of standard lines of credit for each customer/bank, including limits for total contracts outstanding and sublimits for clean risk at liquidations. (Refer to 1983 Annual Report, p. 15.)

During the past several years, the Committee has reviewed a variety of techniques institutions use to assist senior management in monitoring trading risks as well as in allocating bank resources in a manner that reflects both the market risks of the various instruments and the individual institution's resources and attitudes toward risk. During 1988, the Committee prepared a paper on price risk that discussed approaches to managing exposures in foreign exchange and related instruments, both on- and off-balance sheet. Rather than measuring risk by dollar volume, the paper offered a general framework for measuring risk as the potential loss that would arise from an adverse movement in prices or rates. The methodology provided for the development of a standard unit of measurement for price risk that could be used across a variety of trading instruments. (See 1988 Annual Report, p.19.) The Committee also discussed the importance of the establishment of formal programs to control the introduction of new products. It focused on the need for detailed research and documentation before new products are marketed or traded, estimates of projected volume and profit margins, internal cross-functional reviews (such as by legal, accounting, and operations), and the identification of associated risks.

Discussions during 1989 centered on the credit risk arising from forward contracts. As a focal point for these discussions, Heinz Riehl (Citibank) and Thomas Heffernan (Federal Reserve Bank of New York) prepared a document entitled "Pre-Settlement Credit Risk on Distant-Date Financial Contracts" which provides a description of one general approach that banks may choose in monitoring the pre-settlement risk portion of counterparty credit risk. (Their document on credit risk is found on p. 26 of this report.) The approach taken in this paper is to estimate the amount of credit risk that various long-dated contracts expose the institution to on the basis of the relationship of the contract rate to both the current market rate and the estimated future movement in the market rate.

The idea is to come up with an amount for credit risk of these operations that is broadly equivalent to the amount of risk an institution would incur if it had made a straight loan to the counterparty. Hence this approach has come to be called a "loan equivalent" approach. More specifically, the risk factors associated with forward dealing are disaggregated into two components: the current risk amount based on marking-to-market all outstanding contracts (a contract rate more favorable for the bank than the market rate may be thought of as a positive current loan equivalent), and the future risk amount, or future loan equivalent risk, based on expected price volatility. Estimates of future price volatility may be derived from a variety of techniques, including those that use the implied volatility of actively traded options or data on historical price movements.

While pursuing this topic, the Committee members agreed that many market participants use this type of technique and others could obtain useful insights from the above document's analysis of counterparty risk. Members noted, however, that the loan equivalent approach is but one type of methodology available for the evaluation and control of counterparty credit risk. Moreover, some of the specifics noted in the paper may be quite controversial. Even for institutions that use a loan-equivalent approach, there is, for example, variation in the techniques used to estimate future price volatility. Some banks strongly prefer to use the volatility implied by options' prices on the grounds that, theoretically, the implied volatility of actively traded options provides a consensus volatility estimate which should take into account all currently available market information that might affect the future prices of the options' underlying financial instruments. Alternatively, other institutions prefer future volatility estimates based on historical price movements, partly because they do not want to be limited to instruments for which volatility is estimated on the basis of having to have exchange-traded options. Moreover, it was noted that, where margined or netting arrangements are in place, the risk associated with forward contracts may be evaluated quite differently.

NETTING OF FOREIGN EXCHANGE CONTRACTS

In 1989, the Committee, through its subcommittee on foreign exchange netting, continued to stay abreast of the various foreign exchange netting activities of institutions providing or proposing to provide netting services. The Committee has taken a position of advocating netting by novation, but does not favor or recommend one product or method over another.

During the year, interest in and the use of netting cntinued to expand. The incentive to net between interbank parties is primarily driven by the desire to reduce interbank payments, counterparty credit risk exposure, intraday liquidity requirements, and the amount of required capital allocated to this activity. The Committee's 1988 report contains detailed discussions of the various types and terms used in netting activities. (See 1988 Annual Report, p.9.)

Multilateral Netting

While most netting initiatives currently underway tend to focus on bilateral contract netting, multilateral contract netting received increasing attention during the year. A popular approach to multilateral netting involves the use of a single, central clearing facility or agent (clearing house). Net amounts due to or due from each netting participant *vis-a-vis* the clearing group as a whole, called "net net" amounts, are calculated and settled by monetary transfers from net net debtors to net net creditors. The clearing agent may be substituted as principal for each of the counterparties, with respect to each other counterparty and with respect to each bilateral transaction covered by the multilateral netting arrangement.

To limit the central counterparty's credit exposure, there must be mechanisms for limiting losses arising from the failure of a participant and providing for recovery of any losses from surviving participants. There are at least two basic approaches to the management of credit: a **centralized approach**, in which heavy reliance is placed on the posting of collateral as a risk control mechanism and losses from the default of a participant are mutualized; and a **decentralized approach**, in which individual participants maintain a greater role in risk management, bilateral limits are established between participants, and the allocation of losses from a participant's default are based on the surviving institutions' bilateral dealings with the defaulting institution.

Netting Initiatives

FXNET is a limited partnership in the United Kingdom. While studying the issues involved in multilateral netting, it is continuing to expand the number of its active participants in its current bilateral netting network in both London and New York. By year end, fifteen participants were active in London with an additional five in the process of implementation. In New York, six participants were netting through FXNET, with an additional seven in the process of implementation. During the year, FXNET initiated and tested an international link between New York and London and intends to implement this link fully in the first half of 1990.

The **Options Clearing Corporation** (OCC) has provided support for the netting project of six Canadian banks and another of a small group of U.S. banks. Since 1988, the six largest Canadian banks, while informally carrying out some bilateral netting, have been investigating how a multilateral netting facility might be structured and operated. Their investigations of a multilateral netting facility in Canada have been undertaken with the assistance of the OCC. The group undertook a pilot project to assess the operational feasibility and benefits of multilateral netting, and papers on the legal and risk management aspects were completed.

During the year, a group of three New York banks devoted a substantial amount of time and resources to studying the benefits and issues relating to a multilateral netting facility, also with the assistance of the OCC. This U.S. group is now soliciting the participation of other major U.S. institutions to conduct a four-month pilot project with live data. The group of Canadian banks is considering a similar project.

In Europe, an association of banks, **EBIC-ABICOR**, has been discussing the establishment of multilateral foreign exchange netting facilities and recently formalized the project. They propose to study the establishment of a U.K.-based multilateral clearing house with the primary objective of reducing counterparty exposure and clearing costs. This project has an implementation target date of September 1, 1991.

SWIFT, the international electronic message communication system, is developing foreign exchange netting software as an enhancement to its payments message transfer capabilities. The arrangements for bilateral contract novation would be left to the participating institutions.

CONFIRMATION PRACTICES

The issue of confirmations came up several times during the year. There continue to be individual institutions represented on the Committee that, from time to time, discover that either the procedures they use to confirm foreign exchange deals or the specific language contained in the confirmation documentation does not provide the level of protection they presumed. These concerns provoked discussions about the adequacy of current market practices concerning documentation and confirmation of foreign exchange transactions. In addition, members considered whether existing procedures were commonly understood by market participants, as well as whether the benefits of some existing procedures justified their costs.

Most Committee members said that their institutions require two independent checks of the details of each foreign exchange deal. One may take the form of a recorded telephone confirmation with the counterparty, in which the details of the trade and payment instructions are reviewed. The other could be confirmation advice by mail or telex.

When it comes to spot transactions, however, there appears to be less uniformity of practice because mailed confirmations are often not received before settlement of the trade. Written or hard copy confirmations for spot deals, such as those sent by telex or SWIFT, may be checked if these advices are received at least a day prior to the value date.

Some banks operate on the assumption that confirmation for a spot trade by a recorded telephone conversation is adequate as long as the contracts settle; they retain written confirmations only for use in the case of a disputed or failed trade. These banks have adopted this procedure in order to reduce office costs. They are willing to accept the risk that their more informal confirmation procedures may expose them to a larger number of misdirected spot trades.

Committee members expressed concerns about the apparent lack of standardization or uniformity of actual market procedures, particularly with respect to spot deals. A subcommittee was, therefore, established late in 1989 to study market practices concerning deal confirmations and to consider whether the Committee should act more forcefully in promoting more uniform confirmation standards. This subcommittee may also consider other elements of documentation of trades.

Questions were also raised about the assignment of responsibility when disputed or misdirected trades are left undetected for an extended period of time. The Committee recognized that early identification of problems or discrepancies may facilitate and possibly reduce the cost of a misdirected trade. Some Committee members wondered if there should be an understanding that, if an institution fails to inform a counterparty within a specified, reasonable amount of time that an expected movement of funds to or from an account has not occurred, the institution can be considered at least partially responsible for the error. The difficulty is to identify the appropriate amount of time for a principal to be informed by its correspondent bank that an expected movement of funds into or out of its account has not occurred. Apparently, under current market practice, *nostro* account balances are reconciled as frequently as daily or as infrequently as weekly.

Automated Brokers' Confirmations

Representatives of brokerage firms brought to the Committee's attention a proposal currently under consideration to automate brokers' confirmations in the United States. An automated confirmation system would be designed to provide direct network links between brokers and banks for confirming trades and settlement instructions. It would be expected to speed the transmission of confirmations and settlement instructions, thereby reducing the costs of errors and processing. The Committee expressed support for the objectives of the proposal and asked to be kept abreast of developments in any new confirmation product.

ISSUES PERTAINING TO MARKET STRUCTURE

FOREIGN EXCHANGE TURNOVER SURVEY

The Committee welcomed the results of the survey of turnover volume in the foreign exchange market conducted by the Federal Reserve Bank of New York during April 1989.

One of the Committee's contributions during late 1988 was to advise the Federal Reserve in its preparation for another in its series of turnover surveys. The Committee reviewed a draft survey form to provide guidance on its structure and content. Members' comments focused particularly on ways to clarify instructions. Proposed changes in the survey design were discussed, such as the collection of turnover data for the Australian dollar and cross-currency trading activity.

The turnover survey findings, released on September 13, 1989, estimated that average daily volume in the U.S. foreign exchange market had averaged $128.9 billion per day during the month of April 1989, an increase of 120 percent from March 1986, adjusted for double counting. (See p. 30 for summary of the U.S. survey results.)

Committee members were impressed with the continued growth in market volumes. They expressed the view that the importance of the United States foreign exchange market was not limited to its share of global foreign exchange markets. They noted, for example, that another element of its importance was the frequency with which the U.S. market leads in exchange rate movements. The U.S. market is often seen as setting the direction of movements in key exchange rates, partly due to the timing of the release of key U.S. economic statistics. The apparent lead in rate movements also may reflect the fact that trading in the U.S. market, particularly late in the afternoon, is often thinner than at any other time in the around-the-world cycle. Consequently, trading in the U.S. market is at times particularly susceptible to being influenced by some large deals.

Committee members believed that April was a representative and therefore appropriate survey month. They were in accord that the survey was useful. There were mixed views, however, about the optimal frequency of surveys. While several members thought that three years between surveys was acceptable in light of the reporting burden, others believed that the surveys should be conducted more frequently.

Committee members welcomed the results of surveys undertaken in other important trading centers as well. The Committee had been influential in advising the Federal Reserve Bank of New York prior to the 1983 turnover survey that it would be useful to encourage the participation of other central banks in conducting turnover surveys in their respective trading centers.

IMPLICATIONS OF EUROPEAN FINANCIAL INTEGRATION AND THE GROWING IMPORTANCE OF THE YEN

The Committee devoted one meeting early in the year to analyzing the implications of the evolving financial and economic integration within the European Community (EC) on foreign exchange markets and New York as a financial center.

The discussion opened with one member pointing out that yearning for financial integration has deep roots in European history. The formation of a customs union among German states, the "Zollverein" in 1834, 35 years before Bismarck created a unified Germany, is an example of how economic and/or financial union can precede political unification.

The current proposal for Economic and Monetary Union envisages a three-stage plan. The first stage, effective July 1, 1990, calls for the abolition of exchange restrictions and membership of all EC currencies in the European Monetary System. In the second phase, a regional, European-system of central banks would be established, with responsibility for formulating exchange rate policy. (Exchange rate realignments would still be possible at this stage.) In the final stage, exchange rates would be locked and a single common currency would be adopted. The "blueprints" for economic and monetary union call for the completion of the internal market or European Single Market by 1992.

In the opinion of one member, the trend to monetary union is probably inevitable. But the process may be more difficult and the timetable more extended than many of the policy statements made by EC statesmen now suggest. Many other Committee members expressed awe at the apparent coalescence of public support, at least on the Continent, for integration, even though deep divisions among EC members may remain. But there was general skepticism that the first stage would be realized as planned or that full implementation could be achieved in less than 10 years.

Most members predicted that London will remain as the dominant financial center in the EC, assuming the United Kingdom joins fully in the program. London has the advantages of using an international language, serving as an offshore center, and having in place an established exchange-rate quotation system.

Most Committee members also believed the Deutsche mark would remain the dominant currency, supported by the strength of the German economy and reserve-currency role of the mark. Further, it was thought that political and economic influence of the EC will increase over time, particularly if access to Eastern European markets continues to improve.

There was general agreement that the ultimate impact of European financial integration on New York as a financial center and on the dollar will depend in good measure on how financial institutions position themselves in a highly competitive environment, how the range of instruments and the type of market oversight evolve in national markets, and how trade and capital flows are altered by economic and political events.

According to one scenario suggested to the Committee, the impact on equity markets might be favorable for New York as a financial center. Currently, equities are traded in fragmented national markets of varying degrees of depth and sophistication and limited international linkages. By 1992, an international stock exchange, automatic quotation system is supposed to be established which could provide an effective link between the equity markets in Europe and in the United States. Such a development would make it easier for European investors to trade in New York and for U.S.-based institutions to originate orders for Europe.

The impact for fixed-income securities could be different, however. The process of eliminating barriers to capital flows in Europe might lead in the early 1990s to a succession of "Continental Mini-Bangs" — explosions of activity in financial markets of Europe and phases of deregulation similar to the "Big Bang" that occurred in London in 1986. The result could be the creation of an impressive, pan-European market for fixed-income securities that would be as efficient, liquid, and large as any fixed-income market in the United States or Japan. In that event, European borrowers would have fewer incentives to issue debt in the United States, and U.S.-based institutions would find increased opportunities for issuing or trading debt in Europe. These activities could foster continued demand in the United States for foreign exchange and interest-rate hedge products.

To the extent that a single central bank and European currency were not created quickly, the foreign exchange markets might develop in such a way as to focus far more in the 1990s than before on cross-currency trading. Even if London remained the largest financial center in Europe, others — such as Frankfurt, Paris, and Amsterdam — could account for an important amount. Taken together these developments suggest that the share of foreign exchange business involving the dollar directly might decline significantly.

The markets, as early as 1989, experienced a significant rise in non-dollar cross-currency trading and a corresponding relative decline in the importance of dollar trading activity. Several members talked of the possibility that the United States may face increasing difficulty in attracting sufficient foreign capital to finance its current account deficit if the dollar's relative importance declines too rapidly.

Sharing their reflections on the impact of these developments on the U.S. financial markets, members expected that interest rate-based products will continue to expand more rapidly than exchange rate-based products in the coming years. But the presumed strength of global demand for hedging products in both areas provides the United States with a chance to retain its leadership role in the development and provision of derivative products of all types, including synthetic hedge instruments.

Growth in Cross-Yen Trading

Similar trends are visible in yen-denominated business. A major policy thrust by the Japanese government to liberalize and internationalize the Japanese financial and capital markets, together with the role of the Tokyo market as an exit through which Japan exports capital to the rest of the world, combine to increase greatly the role of the yen in financial markets generally. Symptomatic of these developments, trading involving the yen has increased rapidly in the Tokyo market. The yen is being used as the currency of denomination in a growing proportion of Japan's import transactions, partly as a result of a decline in the share of raw materials and fuels — which are typically traded in dollars — and a rise in the share of manufactured imports — which are frequently traded in yen.

ADEQUACY OF REVIEW OF MARKET PRACTICES

The Committee expressed concerns about the adequacy of current mechanisms or procedures for the review of market practices. These discussions touched on the desirability of establishing a voluntary market practice review board in the foreign exchange industry to recommend or arbitrate settlement of differences when disputes arise as well as to address more general procedures about market conventions that might reflect negatively upon the industry.

This discussion had been stimulated by the Task Force on Points established in 1988 by the Committee to review the issue of points in the brokered foreign exchange market and

develop recommendations for acceptable conventions for resolving disputed trades. As part of its report, the Task Force had suggested that the Committee consider the formation of a foreign exchange review panel to provide a forum for the mediation of disputes.

In responding to the Task Force's suggestion, the Committee wrestled with several issues such as: 1) Is such an institution needed? 2) If so, what should be its scope — narrow to deal with trading disputes or broad to serve as well as an advocate for the foreign exchange industry? and 3) Can the perceived needs of the industry be served by an existing organization or is a new one desirable?

These issues were clearly drawn at an organized debate that several members of the Committee presented to the rest of the group. Specifically, the propositions debated were:

A) The institutions participating in the United States foreign exchange market need an organization to protect, preserve, and enhance the integrity of their market and operating practices and to advocate policies favored by the industry.

B) Were it decided that the market needs such an organization, the organization should be free standing, with stature, membership recognition, and responsibilities not unlike those of the Public Securities Association.

Arguments advanced in favor of the resolution during the debate and in subsequent Committee discussions stressed the need for an institution to provide more effective promotion of the interests of the industry and to enhance the quality of conferences, seminars, and training sessions for itself, customers, and the public. They pointed to the need to resolve highly technical disputes in a timely fashion and, perhaps, even intervene in some situations. Such an organization would need administrative support, something no existing institution currently has. The benefits to the industry were seen as being direct, widespread, and probably sufficient to justify the costs of establishing a new organization.

Arguments opposed to the resolution drew attention to the lack of support industry members have provided in the past either to a broad-based organization, such as the Forex Club, or to a narrowly-focused institution to arbitrate trading disputes, such as the Market Practices Committee that Forex USA sponsored during the 1960s and 1970s. They pointed up the difficulties of establishing any organization to resolve disputes effectively, inasmuch as 1) institutions do not wish to bring their disputes into the open, 2) institutions may be reluctant to accept resolution of disputes by either mediation or arbitration, and 3) enforcement powers of any new as well as existing organization would be limited by anti-trust considerations. As for promotional work, institutions within the industry already support many promotional activities — both individually and as members of existing trade groups or other organizations. Whatever additional needs the industry feels should be served could and should be taken up by either Forex USA, perhaps with some changes in that organization, or by the Foreign Exchange Committee itself.

These issues were still under discussion at the end of the year. The members that staged the debate undertook to try to formulate a more specific recommendation for the Committee to consider during 1990.

PROCEDURAL MATTERS OF THE FOREIGN EXCHANGE COMMITTEE

The Committee held seven formal meetings during the year, somewhat more than usual in order to accommodate the Committee's agenda and members' desires to move forward quickly on various issues. In addition, the Committee arranged a special meeting in May to discuss the impact of European financial integration on foreign exchange markets and on New York as a financial center.

FORMAL MEETINGS OF THE COMMITTEE

Meetings in 1989	Schedule for 1990
February 3	February 2
February 24	June 1
April 7	August 3
June 9	October 5
August 4	December 7
October 13	
December 1	

SUBCOMMITTEE MEMBERSHIP AND ACTIVITIES

Early in 1989, the Committee accepted the report of its Task Force on the practice of points in brokered transactions. The Task Force consisted of several Committee members as well as nonmembers with special expertise.[1] The Task Force was able to make suggestions to the Committee on some issues but was deadlocked on others. After resolving these remaining issues, the Committee circulated, on March 23, a letter to market participants advocating the discontinuance of broker points in the foreign exchange market Later on, in a letter dated November 3, the Committee reported that the reduction in the use of points had improved the trading environment in general and dealer/broker relationships in particular. Furthermore, the practice of broker points was no longer considered to be an acceptable market convention. On December 5, the Committee's Chairman wrote to members and alternates pointing out that being a "participating" bank under London's new dual broking system was not consistent with the Committee's position on the practice of points. These three letters appear in this report beginning on p. 15.

Late in 1988, the Committee had established a subcommittee to study the valuation of foreign currency options. In 1989, the subcommittee formulated a plan, which was adopted by the full Committee, for establishing benchmark rates for the implied volatilities of selected foreign currency options. Subsequently, the subcommittee selected a panel of market makers to participate in the project by providing quotes and it obtained the Federal Reserve Bank of New York's agreement to collect, process, and publish the information. A background information paper on the statistical release, which was first issued early in 1990, is printed on p. 24. The subcommittee will continue to monitor and review the project, and periodically arrange for at least a partial rotation of participants on the panel of market makers. During 1989, this subcommittee was chaired by James Borden and consisted of David Harvey, John Caulfield, James Hohorst (Manufacturers Hanover), Lisa Polsky (Citibank), and Kumar Ram (Chemical Bank). Jan Oser, David Roberts and Thad Russell (all from the Federal Reserve Bank of New York) assisted.

In 1989, a subcommittee chaired by John Caulfield and including John Arnold, David Puth, Robert Jarrett, and Woody Teel continued to keep the Committee apprised of the progress and implications of various netting initiatives.

Another subcommittee was formed to examine and recommend ways to improve confirmation practices in the

[1] The Committee's 1988 Annual Report carries a list of task force members (p. 13) and their findings (beginning on p. 24).

foreign exchange market. This subcommittee was chaired by David Puth. James Leitner, Woody Teel, John Christopherson, and Richard MaGee also served on the subcommittee.

Also during the year a group of members organized a debate evaluating the need for a voluntary market practice review board to arbitrate disputes and help assure market practices in the foreign exchange industry are of the highest caliber. These members were John Arnold, Arthur Meehan, William Rappolt, David Harvey, and Nick Brown. After the debate, the Committee asked these members to follow up on the issues in a project that is continuing in 1990.

Late in the year, Heinz Riehl, Tom Barman, and Woody Teel, assisted by Tom Heffernan of the Federal Reserve Bank of New York, reviewed a paper on the control of counterparty risk. This paper appears beginning on p. 26.

Finally, the permanent subcommittee on membership addressed the question whether the Committee's membership structure should be altered. This subcommittee, whose work and recommendations are described below, was composed of Margaret Greene, James Borden, William Rappolt, and William Maxwell.

REASSESSMENT OF MEMBERSHIP STRUCTURE OF THE FOREIGN EXCHANGE COMMITTEE

During 1989, the Committee felt it appropriate to consider a broadening of the membership structure to enhance access to foreign exchange market participants as the Committee continues to deal with challenging and controversial issues such as points. Concerns were expressed that the composition of the Committee had become less representative of the foreign exchange community, particularly as institutions from other countries and non-bank financial institutions have played increasingly active roles in the U.S. foreign exchange market. (Refer to the U.S. Foreign Exchange Market Survey, p. 30.) To broaden its perspective on matters such as market practice and risk management, the Committee felt that it might be useful to alter the composition of the Committee to encompass greater participation by foreign banks and investment banks. Notwithstanding the benefits of broadening the membership base, concerns were at times expressed that expansion and diversification of the Committee membership might dilute the cohesiveness of the Committee, thereby jeopardizing the process of moving to consensus on important, and often, controversial issues.

The Subcommittee on Membership was convened and recommended changes in the membership structure, below, to make the composition of the Committee more representative of the institutions operating in the U.S. foreign exchange market.

The Committee concurred with the recommendations and concluded that a change in the Committee's membership was warranted. The amended Document of Organization is printed on p. 53 of this report.

Composition of Membership

1989		1990
5-6	East Coast Banks	5-6
2-3	Other U.S. Banks	2-3
2-3	Foreign Banks	2-4
--	Investment Bank	1
1-2	Brokers	1-2

President of Forex USA, Inc.
Federal Reserve Bank of New York

THE USE OF POINTS IN THE BROKERED FOREIGN EXCHANGE MARKET
March 23, 1989

On May 3, 1988 the Foreign Exchange Committee distributed a letter expressing concern about the use of points by banks and brokers in deferring the financial effects of disputed trades in the foreign exchange market.

The Committee's letter was based on concerns that this practice may undermine institutions' financial records, distort the neutrality of brokers, and invite unethical, if not illegal, abuses by the parties involved. Although points usage expanded apace with the volume of foreign exchange transactions, in few instances was the practice of points sanctioned by management. Nor was management made aware of financial obligations undertaken in the name of its institution through points transactions. The letter went on to recommend that participants in the brokered foreign exchange market either prohibit the use of points by their employees or establish procedures that would address the concerns expressed by the Committee.

In conjunction with the May 3 letter, the Committee established a Task Force, consisting of representatives of bank management, bank dealers and brokers, to review market practices involving points. The objectives of this review were to identify the situations that give rise to points and to develop acceptable conventions for resolving disputed trades and providing compensation where appropriate.

After considering the findings of the Task Force, the Foreign Exchange Committee has concluded that market conventions need to be changed so as to eliminate the need for a points system of any kind. Furthermore, situations that involve payment of compensation between banks and brokers should be addressed in ways that provide for full documentation, management review, and cash settlement.

Suggested Changes in Market Convention Concerning Rate Quotation

The Committee believes that the market convention concerning the quoting of exchange rates by brokers should NOT require brokers to substantiate prices until changed or canceled, as described below.

The Committee believes this suggestion represents the best hope of relieving the foreign exchange market of the taint of suspicion and unethical practices that may surround the use of points. At the same time, the Committee recognizes that its suggestion represents a significant change in market practice, not only here but elsewhere, and so has requested the Federal Reserve Bank of New York to discuss with other central banks the possibility of extending this change to other major financial centers.

The Task Force found that points are most frequently used to avoid missed prices. A broker proposes a transaction at a given price but a bank dealer misses the price because, before this transaction can be confirmed by the broker, the deal is completed with another institution or the original counterparty has canceled his interest. If a bank dealer insists on doing the transaction at the original price — or if the broker offers to find another counterparty at the same price — but in the meantime the exchange rate has moved adversely, the broker may arrange for the deal to be closed by borrowing points from a bank. The difference between the price first quoted and the then-current market price is the number of points. If it is the bank dealer that insists that the broker perform at the originally quoted price, the dealer is said, in market parlance, to "stuff" the broker. Stuffs occur only because it has been a generally accepted market practice to assume that prices shown by brokers are "firm." That is, the broker has been presumed to be able to execute a transaction with an acceptable counterparty at the stated price until the price is changed or canceled.

The convention of "firm prices" was originally adopted when the exchange market was much smaller and banks were concerned that brokers might fabricate price quotes to attract business The foreign exchange market has now grown to a size such that these concerns are not sufficiently important, under most normal circumstances, to justify the problems associated with the points practice. Moreover, in an age of international brokerage links and broadcasting of prices to an ever expanding audience of traders, the presumption that prices remain firm until changed or canceled is no longer realistic.

In the view of the Committee, brokers' customers should still expect that, at the instant a broker quotes a price, he has an acceptable counterparty prepared to deal a marketable amount at the quoted price. However, by the time a bank dealer can respond, the transaction may have already been executed by another bank that responded faster, the original counterparty may have withdrawn the price, or a new price may have been proposed by a different institution. Banking institutions have reason to believe that brokers have strong incentives to live up to these expectations. Those brokers that do not have counterparties or otherwise let their customers down more than most will be seen, other things being equal, as offering an unreliable and uncompetitive service to their customers.

Accordingly, the Committee urges bank management to establish clear policies against their dealers' stuffing brokers and to encourage the understanding that brokers are not required to substantiate prices.

The Committee recognizes that a number of institutions have formally adopted a "no stuff" policy, but individual dealers do not always abide by such a policy. Moreover, a dealer may intimidate a broker, without formally stuffing, by threatening to suspend the broker's service. For this and many other reasons, bank management should play an active role in overseeing bank-broker relationships

At a minimum, a senior member of the management team should be designated to identify the brokers the institution will use, establish the terms under which brokerage service is to be rendered, provide oversight to ensure that its policies relating to bank-broker relationships are being adhered to, and be available to intercede in any disputes that may occur.

At the same time, the Committee urges broker management to enforce a practice of refusing stuffs from bank dealers and to bring problems they may have with individual relationships to the attention of the appropriate level of management at the institution involved.

As an integral part of these arrangements, the Committee expects brokerage firms to have in place clear policies prohibiting position-taking by brokers and requiring that any position that a broker might be forced into as a result of a problem with a particular transaction be closed out at the earliest practical time after the problem has been identified.

Other Suggestions for Eliminating the Need for Points

The Task Force found that the largest points transactions were caused by errors and misunderstandings that were not quickly recognized and resolved. It concluded that banking institutions and brokers should do more to avoid mistakes and misunderstandings in a market that depends on verbal communication in frequently fast-moving and hectic market conditions.

Managements of both banking institutions and brokerage firms should review their own procedures and make clear to their staff, if necessary at regular intervals, the importance for the reputation of their institution and the operation of the market of acting reasonably and professionally in all circumstances.

Management should play a key role in reminding its staff of, and training new staff in, the need to use clear, common terminology, to be aware of standard market practice and to follow the procedures of their institution.

Management should consider instituting more frequent intra-day checks of deals with the other counterparties, including those arranged through brokers. The current norm of checking once daily may be inadequate.

Suggestions Relating to the Resolution of Differences and Disputed Trades

When differences do occur, the following procedures should be observed in documenting and settling the consequent financial effects:

1. Immediately upon realizing that a problem exists, both the trader and the broker have the responsibility of closing out any residual market risk and of identifying the dollar amount of any difference or dispute. This is a specific application of a more general proposition regarding position-taking activities of brokers and dealers: any time a broker is forced into a position, the broker should close out that position at the earliest practical time; any time a mistake occurs that puts a dealer in an unintended position, the dealer should either close out that position at the time the situation is discovered or take full responsibility for any loss that may subsequently occur.

2. At the banking institution and at the brokerage firm, management personnel not involved in the original transaction producing the difference should identify how the difference arose and confirm the dollar amount involved in order to allocate responsibility for the difference. This procedure transforms the dispute from an individual trader-broker issue to an inter-institutional issue.

3. A written version of how the difference arose should be produced for the records of each firm.

4. The banking institution and the brokerage firm should exchange written confirmations of the dollar amount of the difference and a date by which the difference will be settled. These confirmations should be sent to the areas that normally handle confirmations, with a copy to the principals involved. These confirmations should be the basis for creating accounts payable or receivable balances in the name of the banking institution or the brokerage firm involved.

5. Management should determine the level of exposure it is willing to accept *vis-a-vis* any firm and be able readily to identify the level of outstandings at any time.

6. Settlement of differences should take place on a regular basis not normally extending beyond the end of the following month.

7. Either the banking institution or the brokerage firm may request expedited payment of outstanding claims at any time.

8. At the time the amount of compensation is set, the amount of money involved in the settlement should be entered to an accounts payable or accounts receivable balance in the name of the brokerage firm or the banking institution, with an offsetting entry either to a foreign exchange profit and loss account or to an errors account.

9. Most differences arise in connection with spot transactions. Should a difference develop from transactions involving forward or term swap transactions, compensation should coincide with the term of the underlying transaction.

The actual settlement of any bank-broker differences that do rise can be settled by one of two methods:

A. Difference Checks

Under this procedure, any difference in a transaction would be paid by way of check payable to the institution, not an individual, to which the difference is owed. Payment could be made either periodically within the time frame suggested above or for each transaction, according to some predetermined schedule mutually agreeable to the two parties. Management should review regularly the individual and aggregate payments from and to each broker to identify patterns or unusual activity.

B. Adjustment of Brokerage Bills

Under this procedure, brokerage firms would add a line at the end of the brokerage bill and after taking account of any discounts, titled "adjustment for differences." If credits exceed the amount of a current month's bill, the remaining balance should be repaid in full by check and/or credited to the brokerage bill at the end of the following month.

It is the Committee's view that the settlement of differences between banks and brokers should be even-handed, providing for payment to as well as from brokers. Banks should assume that errors that turn out to be in the broker's favor are also to be settled in the manner described above; in other words, these procedures should provide for compensation being paid by banks to brokers as well as the reverse.

An institution should have an explicit statement of policy on how its institution should proceed to reduce and deal with differences or disputes. Such a statement should state explicitly whether and under what circumstances its personnel can become involved in points transactions, recognizing that any traders or brokers who allow unrecorded points transactions to be executed expose themselves to potentially significant financial, legal and regulatory risks. It is the understanding of the Committee that procedures and records regarding policies for settling differences, files concerning individual differences, and records regarding unsettled differences can and will be reviewed by bank examiners.

REMARKS ON THE PRACTICE OF POINTS IN THE BROKERED FOREIGN EXCHANGE MARKET

Forex USA, Inc. Senior Dealers' Seminar, November 9-11, 1989

Margaret L. Greene
Federal Reserve Bank of New York

I am pleased to be able to have this opportunity to speak to you about the practice of points in the brokered foreign exchange market. As I think most of you are aware, "points" arise primarily as a means of dealing with a transaction that cannot be completed as originally proposed. They have also been used to effect compensation for misunderstandings or errors by either a dealer or a broker.

I intend this morning to explain the concerns we at the Federal Reserve and others have about this practice. I will also go over a little of the history about the Fed's involvement with this issue and the current status of discussions on points.

Questions Raised About Points

During the past two years the points practice has come under close scrutiny, and many serious questions have been raised about the practice.

I am sure that some of you may be surprised by the attention this issue has attracted Perhaps many of you, at one time or another, considered the practice of points to represent a practical, if not ideal, solution to technical problems that would attract little attention outside of a dealing room. From the narrow point of view of a dealer or a broker, the practice of points appeared to offer an approach for dealing with missed prices and other problems that was quick, avoided additional clerical work, and avoided managerial review. In short, the practice minimized embarrassment, costly loss of time, and losses. It was in any case difficult for any individual dealer or broker to devise an alternative to points when faced with a potential points situation. Moreover, many probably took comfort in the perception that many others were also engaging in points — one way or another. And some even argued that the practice provided needed liquidity to the market place. It is easy to see, therefore, how points came to grow as a market practice.

Unfortunately, some of the features of points that make them appear attractive to market operators make them quite troublesome from a broader perspective. Let me review a number of the questions that have arisen about points both in internal reviews within the Federal Reserve and in my discussions of this practice with market participants.

Consider, first, the dealer who agrees to a trade at an exchange rate different from that the broker originally proposed, on the grounds that the broker will "make up the difference" or "pay back the points" later. The dealer may believe he simply resolved the problem quickly in a way that lets him get on with trading while still accommodating his broker. In fact, the dealer has extended credit to the broker — a credit in the amount of the difference or dollar value of the points. But banks typically do not authorize their foreign exchange dealers to lend. Nor do they establish credit lines for dealing purposes to foreign exchange brokers. Therefore, the dealer in this situation has engaged in an **unauthorized activity** with an **unapproved credit risk.**

Suppose, instead, that a dealer agrees to a request from his broker to book some positive points early in the day, on the expectation that the broker will work them off later as he pays points to others. If by the end of the day or the end of the month some positive points remain, the dealer has, in effect, **unjustly enriched** the bank and **overstated his profits.** Such an action is little different from deceiving bank management or falsifying the records used by bank management, auditors, examiners, and others.

Now let's look at the broker's side. Most of us can readily understand how a broker may incur negative points, perhaps at no fault of his own How a broker acquires the positive points to repay his points obligations is not as clear. A concern is that banks are unwittingly victimized by the process — accepting a price at which, perhaps, one of their dealers may be content to do business but not receiving as favorable a price as they might have received on that transaction.

This observation brings me to, perhaps, the **least** understood feature of the points system. That is, that the system of stuffing brokers and compensating by points costs banks money. An individual dealer may smugly believe that he has achieved a profitable trade. Or an individual bank may believe that it can profit from the arrangements. But in fact, whenever a dealer stuffs a broker, the dealer may be forcing the broker into a points position. To the extent that the broker repays his points obligations with positive points, some other bank in effect pays the price. Since it is virtually impossible for even the most experienced and sophisticated dealer to detect if, among all of the trades to which he has agreed, one or more is slightly off market, given the speed with which rates change,

the bank that pays the price may not know that it is being victimized. When analyzed in this way, the points system turns out to be little more than a sophisticated skimming operation.

Now let us consider the relationship between the bank and the broker. Questions have arisen as to whether a broker who has a points position, or who feels a precautionary need to develop a positive points position, can truly serve as an impartial intermediary between his customers. Is it possible that a broker would show a more favorable rate to a bank to which he owes points than to others? Even if the broker did not, might his bank customers not have the perception that the broker is acting in such a discriminating fashion and therefore lose confidence in the quality of the broker's service? All of us have to agree that in recent years there has been a growing atmosphere of suspicion between dealers and brokers. Such an atmosphere weakens the fabric of the market and benefits no one.

Another concern is that a practice that lies outside management approval and review — either at a bank or a brokerage firm — invites abuse. It does not take much to imagine a variety of forms of compensation, both monetary and non-monetary, that may be used to repay points obligations. Moreover, the existence of this or similar practices creates a general environment in the marketplace that is hospitable to abuse and is otherwise unhealthy. The practice is symptomatic of a culture that places the personal interests of individual dealers and brokers above adherence and support for management policies and priorities, tends to widen the gap internally between management and the dealing personnel, and ultimately can lead to individuals compromising their responsibilities to their respective employers.

The use of points on an unrecorded basis is particularly dangerous and may even be illegal. Whenever transactions are entered into by a representative of an institution and not explicitly recognized in the records of that institution, the institution's records cannot accurately reflect its dealings. The integrity of bank records is, of course, of concern to regulators, tax authorities, auditors, shareholders and many others. Traders or brokers who allow unrecorded points transactions to be executed, therefore, expose themselves to potentially significant financial, legal, and regulatory risks.

As the volume of trading expanded, the international link lines of the brokers developed, and the volatility of exchange rates increased, the magnitude of the points problem grew. At the same time profit pressures on dealers were becoming more intense. The combination of the practice of "stuffing brokers" together with an aggressive use of the dealer's privilege to cancel opened up a vehicle for shifting the burden of managing a foreign exchange position. Dealers could come to realize a greater proportion of those deals that were immediately profitable, while forcing those deals that were not immediately profitable on to the brokers. If this tendency were left unchecked, the points system would come to finance a growing proportion of interbank deals.

We have never measured the extent of points usage in this market. But it certainly is clear that the potential existed for the incidence of points situations to multiply and the aggregate amount of outstandings to grow to worrisome proportions. Concerns deepened about the quality of the environment in which individual dealers and brokers were operating on a daily basis. Many regretted the deterioration in the bank/broker relationship. Many also worried that foreign exchange brokers were not capitalized to the extent appropriate to accept the risk of being put into points situations routinely.

It was in this context that both the Federal Reserve and the Foreign Exchange Committee came to review this practice.

Role of the Foreign Exchange Committee in Addressing the Points Issue

For the past two years much of the discussion of the points practice in the U.S. foreign exchange market has taken place within the Foreign Exchange Committee. This Committee is comprised of members of the foreign exchange community, many of whom may be here today. The members of the Committee are invited by the New York Fed to represent a mix of market participants from U.S. money center and regional banks, foreign banks, as well as foreign exchange brokers. It was organized in 1978 as a forum for discussing matters of mutual concern in the foreign exchange market and for relaying views on market conditions and developments to the Federal Reserve. It is composed of individuals with a broad knowledge of the markets who have senior positions within their institutions. The respect that the membership of the Committee can command gives weight to its recommendations, even though the Committee has no authority to enforce its views.

The Committee first expressed its concern about the use of points in 1987 when it wrote of the dangers of the practice in its revised Guidelines for the Management of Foreign Exchange Trading Activities, reprinted in the Committee's Annual Report for that year. Having been made aware of the growing use of points in the market, the Committee decided in 1988 to assume a more active role, believing that, if the Committee did not do so, it might risk being interpreted as condoning the practice. The Federal Reserve Bank of New York was also growing alarmed by the practice for the reasons I have just described. It asked the Committee to devise practical

suggestions for addressing these concerns, hoping to draw on the Committee's expertise in this area.

In May 1988, the Committee sent a letter to a broad range of financial institutions. The letter expressed the Committee's reservations about the practice, urged the immediate review of each bank's procedures, and solicited comments from other market participants.

The Committee then set about establishing a Task Force to review the issue and to make recommendations on acceptable changes in market convention. The Task Force, made up largely of market participants, included individuals whose current experience in foreign exchange dealing gave them the technical knowledge needed to deal with the issue. It consisted of five senior foreign exchange bank dealers, five foreign exchange brokers, and five bank foreign exchange managers, as well as some specialists to provide perspectives on policy and legal issues. Some, but not all of the Task Force members, came from institutions already represented on the Foreign Exchange Committee.

Foreign Exchange Committee Recommendations

The Task Force engaged in constructive and positive give-and-take discussions which yielded recommendations that the Foreign Exchange Committee accepted. On many issues, primarily of a technical nature, the Task Force was able to achieve a solid consensus. You should read the Task Force Report, which was published in the Foreign Exchange Committee's 1988 Annual Report. That report was sent to most institutions in this market and can be obtained from the New York Fed. The Task Force made many good suggestions of actions institutions in the interbank market could take to reduce errors and misunderstandings and otherwise reduce instances where differences or disputed trades arise. Many of these suggestions relate, for example, to training of personnel, use of proper terminology, and frequency with which brokers and traders check out their trades. Of all of these suggestions some of the most important were:

1. **Senior management of both banking institutions and of brokerage firms should play a more active role in overseeing the bank/broker relationships;**

2. **Periodic settlement by cash is certainly an acceptable, if not preferable, form of compensation for resolving differences and disputed trades. Moreover, such settlements should be two-way, providing for payment to as well as from brokers when appropriate;**

3. **Managements should establish explicit policies on the handling of differences and disputed trades by its personnel.**

The Task Force went on to conclude that much more could be done to reduce the use of points, although Task Force members were divided on the question of whether points should be completely eliminated.

That issue was left to the Foreign Exchange Committee itself to resolve. In considering what should be acceptable market practice, the Committee wanted to underscore the fundamentally different roles that dealers and brokers serve in the market:

> **Dealers** are responsible for making prices and are expected to transact a reasonable amount with an acceptable counterparty at the stated price until the dealer changes or cancels the price. The dealer's authority to assume a position in foreign exchange, subject to his management's guideline and policies, supports this price-quoting function.
>
> **Brokers**, by contrast, are intermediaries whose principal function is to bring acceptable counterparties together at prices agreeable to both. Brokers' ability to provide dealers with credible and impartial service requires that market convention not force brokers to consent to assume positions in foreign exchange or otherwise provide incentives for brokers to favor some dealers at the expense of others.

Reflecting the clear distinctions between dealers and brokers, the Committee concluded that these principles suggest that points have **no** place in the foreign exchange market.

The Committee also felt strongly that brokerage firms should have clear policies against position-taking by their brokers. Any position unintentionally assumed by a broker should be closed out as soon as possible.

Furthermore, the Committee concluded that, under present conditions, market convention should not require brokers to substantiate prices until changed or cancelled. The current facilities brokers use to obtain and communicate prices to the market simply do not give the brokers the capability of guaranteeing firm prices.

It follows from these conclusions that dealers should not "stuff" brokers and bank management should have clear policies against their dealers "stuffing" brokers. If these practices are observed, the frequency of "missed prices" and, therefore, the need for points would drop dramatically.

For those differences that might still arise as a result of mistakes or other misunderstandings, the Committee believes that all compensation should take the form either of payment in cash or adjustment to brokerage bills. Such compensation when appropriate should go both ways. That is, if a bank is deemed to be at fault in a mistake, a difference check should be made out to the broker.

The Committee recognized that these recommendations for market practice might be inconsistent with practices in other important trading centers abroad But many of the members believed that the recommendations were based on such solid principles of good market practice that, perhaps, others would come to appreciate the merit of the Committee's views over time.

Recent Developments in the Market

While these discussions were taking place within the Foreign Exchange Committee, conditions in the market began to change.

Bank management in many leading institutions in the United States have taken strong action against the use of points by individuals in their institutions. I understand that, as a result, the frequency of "stuffing" has significantly declined and the aggregate amount of points outstanding has diminished substantially. Indeed, perceptions about the practices of "stuffing brokers" and "points banking" is evolving in a way that suggests they may no longer be considered generally acceptable.

One collateral benefit is the significant improvement in the bank/broker relationship, particularly at the senior management level. Disputed trades or differences, which in the past may have been settled through points, are now more routinely referred to management for resolution. This has led to more open communication between banks and brokers.

With the improved environment, the managements of brokerage firms tell me that disputes are resolved more fairly and amicably. The settlement of differences has been more even-handed. To be sure, brokerage firms have paid out more differences checks. But some firms have also received difference checks from banks for the first time in years. Moreover, the working environment in the brokerage firms in general has improved with the reduction of the constant stress of dealing in points freeing brokers to focus their energies on the job of brokering.

These changes have been accomplished without any apparent decline in liquidity. Actual experience demonstrates that the points practice is not necessary to ensure liquidity — even in some of the episodes of exchange rate volatility experienced in recent weeks.

The progress being made so far is therefore reassuring. The industry is seen as having had the courage to identify a problem and propose meaningful remedies for a practice that was damaging to the market and had the potential to lead to embarrassment to the profession.

The process by which the points issue was tackled is, I think, broadly believed to be constructive. The approach was clearly collaborative. The bringing together of market practitioners and the Federal Reserve, as was done through the Foreign Exchange Committee, provided for a blending of perspectives and an effective mechanism to improve market practice.

The Federal Reserve played several roles in this process. It was able to articulate many of the concerns which needed to be addressed.The Federal Reserve also, of course, left open the possibility that, if market professionals could not find satisfactory solutions, remedies might be unilaterally imposed by the regulators.

In the end, the recommendations that came out of the Committee process were responsive to our concerns as well as sensitive to the needs of the dealing community. Those representatives from the market that participated in these deliberations devoted many long and sometimes frustrating hours to this effort. I and my colleagues at the Fed greatly appreciate the work they have done.

Despite the important changes that have occurred to date, further progress is called for. Some institutions or individuals apparently have not yet adjusted to the new perceptions of market conventions.

Accordingly, the Federal Reserve has used its offices to encourage a further reduction of points usage and otherwise follow up on the Committee's recommendations. For the past several months, banks being examined by the Federal Reserve Bank of New York have been asked, in the first-day letter they receive from the examining force:

1. What is the Bank's policy with regard to points? and

2. How does management monitor that its policies are being respected?

In addition, I understand that the Federal bank supervisors are giving consideration to the adoption of guidelines covering such practices, and incorporating many of the Foreign Exchange Committee's recommendations. If adopted I am

being told that such a guideline would reflect the supervisors' concern about the potential for abuse. It would also seek to reduce the possibility that a bank could become subject to the variety of irregularities that could emanate from this practice or engage in the practice unless understood and specifically agreed to by the highest levels of the organization. I expect that when the regulators come across an unapproved points situation, they will deal with that situation in the same way they would address any other unauthorized activity.

In concluding, let me suggest that there are at least two lessons to be learned from this experience with points that is applicable to market practice in general.

First, market participants on the one hand and monetary authorities or regulators on the other can work closely together to address market-related issues in a way that can be broadly acceptable to all sides.

Second, no market should have a structure or set of conventions that fails to live up to the test of public scrutiny. Even in a wholesale market such as that for foreign exchange, where a certain amount of financial sophistication on the part of participants can be assumed, the basic ways of doing business must conform with generally accepted norms of good business practice if it is to engender the public trust needed to prosper.

COMMITTEE LETTER ON THE USE OF POINTS WITH RESPECT TO FOREIGN EXCHANGE TRANSACTIONS

November 3, 1989

Dear Sirs:

As you may recall, the Foreign Exchange Committee has expressed grave concerns with the practice of points and, most recently, in its letter of March 29, 1989, recommended acceptable conventions for settling disputed trades and differences. At this time, the Committee would like to share with you its impressions of recent changes that have taken place within the foreign exchange community in the United States.

Market perceptions about the use of points have changed. Bank managements in the leading institutions in the United States have acted to eliminate the use of points in their institutions. The Committee understands that the frequency of "stuffing" has significantly declined and, consequently, the aggregate amount of points outstanding has diminished substantially over the past year. Indeed, the practices of "stuffing brokers" and "points banking" are no longer considered acceptable.

The Committee has received reports indicating significant improvements in the banker/broker relationships, particularly at the senior management level. Disputed trades or differences, which at times in the past may have been settled through points, are now more routinely referred to management for resolution. This has led to more open communication between banks and brokers.

With the improved environment, brokers now believe that disputes are resolved more fairly and amicably. The settlement of differences has been more even-handed, and some brokers report receiving difference checks from banks for the first time in years.

Moreover, it is the Committee's understanding that these changes have been accomplished without any apparent decline in liquidity. Actual experience demonstrates that the points practice is not necessary to ensure liquidity in a variety of market conditions.

Despite the important changes that have taken place to date in the brokered foreign exchange market, further progress is needed. Some institutions or individual dealers apparently are less than fully aware that market conventions have changed. The Committee would, therefore, like to reemphasize that the practice of points in any form is no longer an acceptable market convention. Any institution engaging in this practice undermines the integrity of the U.S. foreign exchange market.

Very truly yours,

Christine W. Patton
Chairman

LETTER TO COMMITTEE MEMBERS ON THE USE OF POINTS WITH RESPECT TO FOREIGN EXCHANGE DEALINGS

December 5, 1989

Dear Members:

Foreign exchange brokers in London are now polling their clients worldwide, asking for notification as to whether each will participate in points activity or not. The Bank of England has set a deadline of December 31, 1989, for such decisions. Any worldwide banking entity, branch or subsidiary, having contact with brokers, including your offshore branches, may be solicited on this issue.

Over the past two years, you have contributed towards framing the policy of the Foreign Exchange Committee on the practice of points, and many of you assisted in the drafting of our last letter on this subject (see attached). During our discussions, you have advised the Committee that your institution's policy does not permit the use of points in the U.S. foreign exchange market.

The arrangement for being a "participating" bank in London is **not** consistent with the Committee's recommendations with respect to sound market practice. This is because, if a bank in the United States or a foreign branch of a U.S. bank were to agree to participate on whatever basis, that action alone would signify agreement to the perpetuation of the points system and acceptance of its consequences.

Sincerely yours,

Christine W. Patton
Chairman

IMPLIED VOLATILITY RATES FOR FOREIGN EXCHANGE OPTIONS

This paper gives some background information on a new, monthly statistical release entitled "Implied Volatility Rates for Foreign Exchange Options." The paper describes what information is being provided and how it will be compiled and published. A final section gives users some important facts to keep in mind as they interpret and use the data.

Purpose of the Release

The collection of data on options volatility, as presented in this monthly release, is intended as a service for the foreign exchange community, auditors, and examiners. It was initiated by the Foreign Exchange Committee which is sponsored by the Federal Reserve Bank of New York and made up of institutions representative of the foreign exchange market in the United States. The Committee felt that the auditing and management of options market participants would be strengthened by having supplemental and independently prepared information about implied volatility rates. Currently available information was seen as having some limitations for these purposes. Implied volatilities estimated from the pricing data of the organized options exchanges are available for only a small number of currencies and short-term maturities. Quotes an options market participant might obtain from an individual foreign currency broker may not always be considered representative of the market as a whole.

Ranges of Volatility Rates

The release presents a range of implied volatility rates as quoted by market participants as of 3:30 P.M. on the last dealing day of the month in New York. In compiling the ranges, the extreme pairs of bid and offer rates are excluded. That is, the lowest bid and highest asked rates are dropped so that the published survey ranges reflect the next lowest bid and next highest offer. The purpose of this procedure is to exclude outliers. However, bear in mind that a consequence of this procedure is that the indicated ranges may not reflect the full range of market transactions.

Which Options

The release provides survey ranges of implied volatility rates, bid and asked, for "at-the-money" options on selected foreign currencies. The quotes are for contracts of at least $10 million with a prime counterparty. The contracts covered by the release, which the Foreign Exchange Committee felt included the most actively traded exchange options, are as follows.

Options	Maturities
Currency (against US$)	
German mark Japanese yen Swiss franc	1, 3, 6, & 12 mos., 2 & 3 years
Australian dollar Canadian dollar Pound sterling	1, 3, 6, & 12 mos.
Cross rate	
Sterling/Mark Yen/Mark	1, 3, 6, & 12 mos.

Collecting the Volatility Rates

The Foreign Exchange Committee has enlisted a panel of market participants to provide volatility quotes. The panel has nine members to help ensure that a representative range is established for each contract. To take into account the evolving roles of institutions in the market and to spread the reporting burden, the Committee will review the composition of the panel and arrange for a partial rotation of membership periodically.

Compiling the Volatility Ranges

On the final dealing day of each month, each participating institution completes a standard form, which is verified by its chief options dealer. The panel members submit their quotes to the Foreign Exchange Department of the Federal Reserve Bank of New York which agreed, at the Committee's request, to collect and publish the data. The Bank treats all volatility quotes it receives as confidential and will not disclose the rates supplied by any individual survey participant. In the event a minimum of five quotes is not submitted for a particular option, a volatility range will not be published for that contract.

Publishing the Data

The release generally is available on the first business day of each month. Computer users can obtain it through The Economic Bulletin Board of the U.S. Department of Commerce. It is also offered by some of the commercial wire services. In addition, copies of the release can be picked up at the Bank, either in the lobby or in the Public Information Department on the 13th floor.

Using the Data

The ranges of foreign currency implied volatility rates are intended solely for the use of bank management, auditors, and examiners in their review of options portfolios. The publication of the data does not indicate Foreign Exchange Committee or Federal Reserve approval, or disapproval, of particular options activities. Furthermore, the data should in no way replace the proper risk analysis and management techniques necessary for managing an options position.

Although the volatility rates are collected from sources considered to be reliable, the ranges are provided only for informational purposes without guarantee of their accuracy, completeness, and correctness.

February 1990

PRE-SETTLEMENT CREDIT RISK ON DISTANT-DATE FINANCIAL CONTRACTS[1]

by HEINZ RIEHL and THOMAS HEFFERNAN

Banks have recognized the existence of credit risk on distant-date financial contracts[2] for some time; however, approaches for assessing the size of this risk vary widely. This paper outlines one of several possible approaches that certain large dealing banks in the United States are now using to measure and control the credit risk arising from distant-date contracts.

Generally, the risk of counterparty default can be divided into the risk of default before settlement (pre-settlement risk), where only the cost of replacing the defaulted contract would be incurred, and the risk of default during settlement (settlement risk), where the entire contract amount to be settled is at risk Banks seek to control both types of credit risk by setting limits. This paper, however, deals exclusively with pre-settlement risk Moreover, the approach presented below would generate a "trigger point", or a red flag, for management to deal with credit risk rather than relying solely on absolute dollar limits.

Before the development of techniques to measure risk more precisely, banks dealt with pre-settlement risk by arbitrarily selecting some percentage factor thought to represent the amount-at-risk stemming from distant-date dealing For example, banks have selected 10% or 20% factors to provide a "ball park" estimate of risk Then, based on the bank's appetite for risk with a customer, total contract limits for a given counterparty were established. These arbitrary factors were fairly straightforward and, therefore, relatively easy to understand. But, by ignoring the specific risk profiles of these contracts, the arbitrary factors may have led to a systematic overstatement of risk

A pre-settlement loss results from default when the counterparty defaults **before** maturity of the contract and market prices change in such a way that, from the viewpoint of the non-defaulting counterparty, the contractual rate is more advantageous than the market rate (See Exhibit 1) The non-defaulting counterparty would have to replace the contract at the then-prevailing rates (Exhibit 2).

Exhibit 1

Example of Pre-Settlement Risk

Action Today	
We buy from customer £1mm value 6 months forward at	$1.99
We sell to bank £1mm value 6 months forward at	$2.00
Action 2 months later	
Rate for pound drops from $2 00 to $1.60, our position is square, we are not affected	
Action 4 months later	
Bank fails (will not perform under contract will not buy pounds at $2.00)	
We still must buy pounds from customer at	$1 99
We must sell pounds again at new rate of	$1.60
Loss resulting from bank failure	$400,000

Exhibit 2

Elements of Pre-Settlement Risk

- -Trading partner fails **before** maturity
- -Adverse rate movement
- -Replace contract at "then prevailing rate"
- -Pre-settlement risk (X%)

At any point before default, pre-settlement risk equals the current replacement cost of the contract plus the amount by which that replacement cost could increase as the result of further changes in market rates Therefore, this risk can be disaggregated into: 1) a current risk amount, based on marking-to-market all outstanding contracts; and 2) a future risk amount, based on expected price volatility. The sum of these two components is called the "loan equivalent" amount. The current risk component is simply any favorable difference between current rates and contractual rates times the notional principle (or face amount) of the contract The size of the current risk component can be calculated at any time. In contrast, the size of the future risk component can only be estimated because it depends on future rate movements Therefore, the techniques used to estimate price risk through volatility measures can also be applied to the estimation of future counterparty credit risk -- both types of risk arise from the potential for future rate changes (See Exhibit 3).

[1]This paper is based on a presentation by Heinz Riehl to the Foreign Exchange Committee and was drafted by Thomas Heffernan. The authors wish to thank the Committee members for their many helpful comments and suggestions. The authors accept responsibility for any remaining errors or omissions.

[2]Distant-date financial contracts include forwards, swaps, and purchased option contracts for foreign exchange, interest rates and commodities.

Exhibit 3

Example

Assumptions

• We bought foward value 6 months at	85
• 4 months later market price is	100
Mark-to-market result	
Current risk amount	15
Volatility is 10%	
• Apply 10% to Market Price of 100 Future Risk Amount	10
Total loan equivalent risk	25

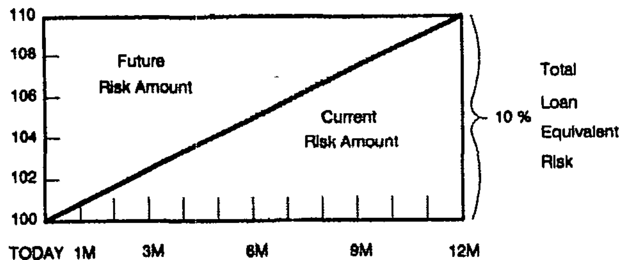
The loan equivalent amount of a newly-issued distant-date contract, undertaken at market rates, will be comprised solely of the future risk component, since the replacement cost will be zero until rates change. Conversely, the loan equivalent amount of a distant-date contract just before maturity will be comprised almost completely of replacement cost, since the potential for that cost to increase is negligible. Most commonly, however, the loan equivalent amount will be a combination of the two components: current and future risk amounts (See Exhibit 4).

Exhibit 4

Distribution of Current vs. Future Risk Amounts

Assumptions

- Volatility for one year is 10%
- Forward rate is 100, at par with spot
- We buy one year forward at 100
- Market rate rises during year and is 110 at end of year



Initially, all future risk amount

As time passes...
- More and More Current Risk Amount
- Less and Less Future Risk Amount

Towards maturity — almost all current risk amount

To evaluate the factors affecting the future risk component, consider first those distant-date contracts that involve a single cash flow, such as a forward foreign exchange contract or a forward interest rate agreement. It is clear that in both of these instruments, the maturity of the contract itself is a factor contributing to the future risk. The future risk amount is larger, the longer the time until maturity of the forward contract.[3] In the case of forward agreements on bonds and forward interest rate agreements, the tenor of the underlying instrument also affects the future risk amount.[4] A given change in interest rates produces a larger price change in a longer tenored underlying instrument than an underlying instrument with a shorter tenor (See Exhibit 5). For example, a 3-month forward on a 30-year bond generates more risk than a 3-month forward on a 1-year note.

Exhibit 5

Counterparty Credit Risk Analysis
Pre-Settlement Risk

Exact credit risk factor
depends on type of instrument

Simple forward contract
Single cash flow
Forward FX
Forward any commodity
- Time until settlement

Forward bond
Forward interest rate agreement
- Time until settlement
- Tenor of instrument

The longer the time period,
the greater the expected price change

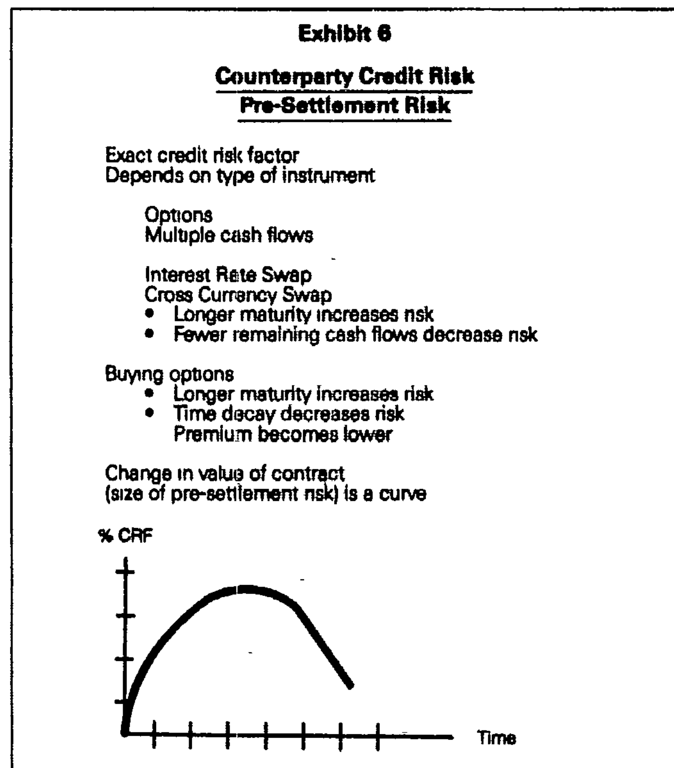
Change in value of contract
(size of pre-settlement risk) is
proportional to expected change in market price

Forwards with multiple cash flows (e.g., interest rate and cross currency swaps) and purchased options have more complex future risk characteristics. Up to a point, the longer the maturity of swaps, the greater the future risk amount. But, after rates have moved and time passes, the decrease in the number of remaining cash flows reduces the remaining future risk amount. The pattern of risk over time, therefore,

[3]Netting arrangements, or other rights of offset such as margin agreements, that the bank believes to be effective could be used to reduce the current and/or future risk amounts depending on the specific circumstances of the financial contracts involved and the terms of the netting arrangements.

[4]This is true unless the volatility measure used is price volatility rather than yield volatility. Price volatility reflects not only the sensitivity of the underlying instrument to changes in yield, but also relects the tenor of the underlying instrument. One problem of using price volatility is that volatilities would have to be estimated for a large number of maturities of the underlying instruments.

starts to rise at the onset but, somewhere along the line, it peaks before decreasing to zero at maturity. Purchased options have a similar pre-settlement risk profile. The longer the maturity of an option, the greater the future risk amount until the decay in the option's time value is large enough to reduce the future risk amount (See Exhibit 6).

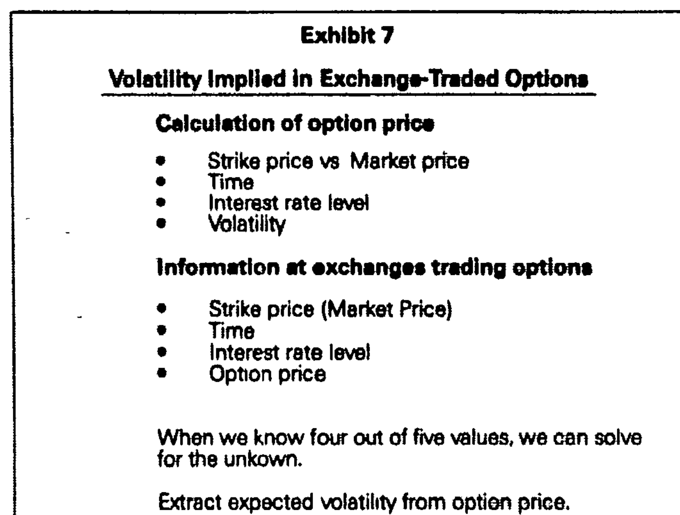


Another factor that may be taken into account is the likelihood concerning the timing of defaults. To the extent that customer defaults rarely are driven by market rate movements, it might improve the estimate of future risk to take into account the point during the maturity of distant-date contracts at which defaults most likely occur, on average. It seems inappropriate, for example, to presume that customers would most likely default immediately after initiating distant-date contracts when the current risk amount would be negligible. The opposite also may be unlikely — i.e., customers default just before maturity of the contracts when the current risk amount is greatest. If it were reasonable to estimate the average default point to be about halfway through the life of the contracts, although a particular default could fall at any point, estimates for future risk amounts could be halved.[5]

[5]Statisical analysis of both the actual and theoretical distributions of credit defaults on distant-date contracts can be employed to add rigor to this type of estimation. Slight variations in individual banks' experiences, stemming from the range and nature of counterparties, should be expected.

Another distinction banks may reasonably make concerning future risk amounts relates to the nature of counterparties' dealing. Banks conduct a significant part of their distant-date transactions with counterparties that are other banks or other participants in the interbank market (i.e., active two-directional trading partners). Transactions undertaken within this context generally are balanced. That is, nearly an equal number of contracts are sold to a particular counterparty as are purchased from that counterparty. An active interbank counterparty that purchases from and sells to the bank an equal amount of forwards likely would generate **half** the future risk exposure in the aggregate as that on the sum of the individual contracts. This is because future rates have the potential only to increase or to decrease; they cannot move in both directions simultaneously.

There are several approaches possible to try to measure volatility used to estimate the future risk amount on distant-date contracts. One way is to base the estimate of future rate volatility on historical data for rate movements over a relevant, earlier time period. Another way is to estimate future rate movements based on calculations of volatility coming out of current options prices. Options' prices often are determined through reference to several variables, one of which is the estimated future volatility of the underlying rate over the option's life (See Exhibit 7). When calculating an option's price, the only unknown variable is volatility. But, when options' prices are known because, for example, they are taken from markets where trades have occurred, options' volatilities can be imputed. The imputed, or implied, volatility of options provides a market consensus of the future rate volatility of the underlying currency or instrument. Ultimately, each bank must choose for itself the best method to estimate future rate volatility. Strong arguments can be made for and against each of these two basic methods listed, and still other methods may be considered.



Volatilities vary greatly depending on specific currencies or products It might be cost effective to identify groups of currencies or products with similar volatilities to avoid unnecessary complications and computations Once the current and future risk amounts are determined, they are combined to form the loan equivalent amount. This loan equivalent is more meaningful than total contract amounts or arbitrarily selected percentages of contract amounts. As such, management can use the loan equivalent amount to monitor or review customer exposures.

A feature of the loan equivalent methodology is that the amount-at-risk can change as the result of large rate movements — that is; without the trading unit undertaking any new contracts ("passive excesses"). As a result of this feature, the loan equivalent methodology may be inappropriate for setting **absolute** customer limits. This methodology could be useful, however, in establishing loan equivalent "trigger points" for each counterparty, based on management's tolerance for credit risk. Whenever a trigger point is reached, a review of the institution's credit risk to that counterparty could be initiated in which management could assess the loan equivalent amount together with other credit extensions. This review would permit management to determine how it wishes to approach futher requests from the counterparty for business.[6]

[6]Another possible use of the loan equivalent amount is in the determination of the profitability and capital adequacy of distant-date dealing. Since a realistic loan equivalent amount is specified, revenues and capital allocations can be assessed relative to this amount using familiar balance sheet and ratio analysis techniques.

To summarize, the actual pre-settlement risk arising from distant-date contracts cannot be anticipated perfectly at the initiation of these contracts because the amount-at-risk depends on future rate movements. In the absence of perfect foresight, there are, nonetheless, systematic approaches to estimate what this exposure might be. The pre-settlement risk includes a current risk component and a future risk component. After the initiation of a distant-date contract, at any point, the current risk amount can be calculated by marking the contract to market The future risk component can be assessed based on an estimate of future rate volatility. These two components together form the loan equivalent amount of distant-date financial contracts. The loan equivalent amount is more precise than ball park figures and is more meaningful than aggregated dollar contract amounts because a potential loss, or loan-equivalent, is specified based on the particular characteristics of the contracts. As such, the loan equivalent amount can be aggregated with other pre-settlement risk amounts and with loans to determine total customer credit risk. This total customer credit risk, in turn, can act as a trigger point to alert management when a credit tolerance is approached or reached so that management can then take appropriate action.

SUMMARY OF RESULTS OF U.S. FOREIGN EXCHANGE MARKET SURVEY

Conducted in April 1989 by the Federal Reserve Bank of New York

In April 1989, the Federal Reserve Bank of New York surveyed the volume and structure of the foreign exchange market in the United States. The survey's principal findings, and comparisons with the results of the previous survey conducted in March 1986, are described below.

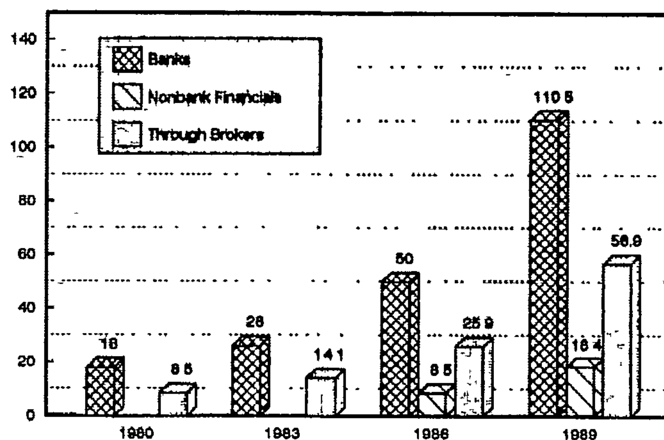
- Adjusted for the double counting of trades between two respondents, average daily volume in the U.S. foreign exchange market was estimated at $128.9 billion per day during April 1989, an increase of 120 percent from March 1986. This estimate is based on gross foreign exchange transactions reported by surveyed bank and nonbank financial institutions that averaged $183.2 billion per day.

  -- After adjusting for the double counting of the same transactions reported by participating banks, average daily volume for the 127 banking institutions in the survey was estimated at $110.5 billion, 121 percent greater than the March 1986 figure of $50.0 billion. Gross foreign exchange trades reported by these institutions averaged $152.2 billion per day.

  -- After adjusting for the double counting of trades reported by surveyed banks and nonbanks, average daily volume for the 14 nonbank financial institutions in the survey was estimated at $18.4 billion, a 116 percent increase from the previous survey. Gross foreign exchange trades by these institutions averaged $31.0 billion per day.

- Thirteen foreign exchange brokers located in the United States who were surveyed separately reported transactions averaging $56 9 billion per day, a 120 percent increase over the $25 9 billion brokered in the March 1986 survey. Based on the bank and nonbank survey data adjusted for double counting, 44.1 percent of U.S foreign exchange turnover was arranged through brokers during April, compared with 44.3 percent in March 1986.

DAILY TURNOVER IN THE U.S. FOREIGN EXCHANGE MARKET
(adjusted for double counting, in billions of dollars)



- The German mark remained the most actively traded foreign currency in this year's survey. The share of turnover of the Japanese yen, the second most active currency, increased.

- Spot trades, which are generally for delivery in two business days, remain the dominant type of transaction About $80.5 billion in spot transactions (adjusted for double counting) were carried out each business day during the survey month, accounting for 62.5 percent of reported turnover Foreign exchange and currency swap transactions remain the next most important in terms of volume There were some significant differences in activity by transaction type between the turnover of banks and nonbanks.

- The dollar value of options contracts traded by banks and nonbanks increased more than sixfold between 1986 and 1989 but still accounted for a relatively small share of turnover — 4.3 percent of the banks' volume and 14.9 percent of the nonbanks' business.

- All but a small share of trades in the United States involve the buying and selling of U.S. dollars. Cross currency transactions, those trades in which foreign currencies are exchanged directly for each other, were surveyed in detail for the first time in this year's survey. They accounted for 3 6 percent of the banks' turnover and 4 5 percent of the nonbanks' activity.

- The foreign exchange business is dispersed relatively widely, with 31 institutions each commanding 1 percent or more of market turnover according to this year's survey data.

- The share of turnover reported by the branches and subsidiaries of foreign banks increased to 40 0 percent in the 1989 survey from 37 4 percent in 1986.

Technical notes

The gross turnover figures reported by banks and nonbank financial institutions are inflated by the double counting of some transactions — those trades reported by the two parties on either side of the trade. For example, trades between two U.S. respondents would have been reported twice.

In these circumstances, estimates have been provided to adjust for the double reporting of the same trade. These adjustments were based on the respondents' identification of counterparties, supplemented by information gained from interviews.

There was no double reporting of transactions within the brokers' survey. Brokers do not deal with one another but rather act on behalf of other market participants Accordingly, virtually all of their turnover was also reported in the surveys of banking and nonbank financial institutions.

Most participating banks with more than one U.S. trading center chose to aggregate their activity and file a single, consolidated response. However, several banks submitted reports for each of their trading centers individually. Thus, in some cases, banks which trade foreign exchange in New York, Chicago, and Los Angeles reported the activity of each trading center. Consequently, a total of 148 responses were received from 127 banks. Similarly, 14 responses were received from 13 brokers.

Foreign exchange activity in the United States during the survey month of April appears to have been fairly typical of the market this year. This view was corroborated through follow-up interviews with selected respondents.

When comparing April 1989 and March 1986 survey results, there are several considerations which should be kept in mind. The gross volumes are not fully comparable since there were 21 business days in March 1986 but only 20 in April 1989 Moreover, comparing daily average figures is complicated by the effects that the Easter holidays may have had in March 1986 While the U.S. market was open on Good Friday and the following Monday, trading operations functioned with minimal staffs, and the closing of many foreign financial centers on those days further reduced trading in the United States

An additional consideration to bear in mind in comparing the results of the two surveys is that the group of reporters has changed Most, but not all, institutions active in foreign exchange during the past three years participated in both surveys. To help gauge the possible effects on the survey findings of changes in reporters, 1986/1989 comparisons were also calculated for the group of institutions which took part in both surveys. These statistics are closely in line with those obtained for all the participants.

Surveyed Institutions and their Turnover

The **banking institutions'** survey of 1989 and 1986 included large money center and regional domestic commercial banks, Edge corporations, and U.S. branches and agencies of foreign banks. All banks that file certain mandatory reports on foreign exchange positions were asked to participate. The surveyed institutions are believed to account for the bulk of foreign exchange activity by commercial banks in the United States. A list of the respondents is attached (see Appendix III).

The 1989 survey included 127 banking institutions. Their daily average turnover, after adjusting for the double counting of trades between two bank survey participants, was estimated at $110.5 billion, an increase of 121 percent from the $50.0 billion registered by banks in the 1986 survey. The surveyed banks reported gross turnover of $152.2 billion per day. These transactions were 141 percent higher than the gross transactions of $63.1 billion per day reported by 109 banks in 1986. The average size of all foreign currency transactions reported by banks was $5.0 million in the 1989 survey, up from $3.4 million in 1986.

A total of 104 trading operations participated in both the 1986 and 1989 surveys. These showed unadjusted turnover of $140 1 billion per day in 1989, an increase of 124 percent from the $62.6 billion they reported in 1986.

The surveyed institutions include some of the largest **nonbank financial institutions** in the United States (see

Appendix III). Typically, nonbank financial institutions have only recently come to play an active role in the foreign exchange market; and some that trade foreign currencies may not have been covered by the survey. However, the data collected from the participating nonbanks are believed to be indicative of the structure of activity of this class of market participants. Nonbank financial institutions which trade foreign exchange through related Edge corporations were included in the bank survey.

The turnover of the 14 participating nonbank financial institutions averaged $18.4 billion per day after adjusting for the double counting of trades reported by other surveyed banks and nonbanks. This is an increase of 116 percent from the adjusted total of $8.5 billion estimated in 1986. The gross turnover reported by these institutions in this year's survey averaged $31.0 billion per day, up 123 percent from $13.9 billion reported in 1986. The average transaction size for all nonbanks was $3.4 million, down from $4.6 million in 1986.

Foreign exchange brokers in the United States were also surveyed. Brokers do not trade for their own accounts, but rather act as intermediaries between market participants wanting to buy or sell currencies. Nearly all brokers in the United States operating in the foreign exchange market were included in the two surveys (see Appendix III).

Based on the data supplied by banks and nonbanks, 44.1 percent of the participating institutions' adjusted foreign exchange turnover was arranged through brokers in 1989 compared with 44.3 percent in 1986. The brokers reported turnover for April that averaged $56.9 billion per day, a 120 percent increase from the $25.9 billion per day reported by 9 brokers in March 1986. The brokers' data showed an average transaction size of $5.8 million, up from $3.6 million in the previous survey. In this year's survey, average deal sizes in all currencies except the Swiss franc were greater in the brokers' survey than in the bank survey. Sterling and Canadian dollar transactions were especially large, averaging over $7.0 million per deal.

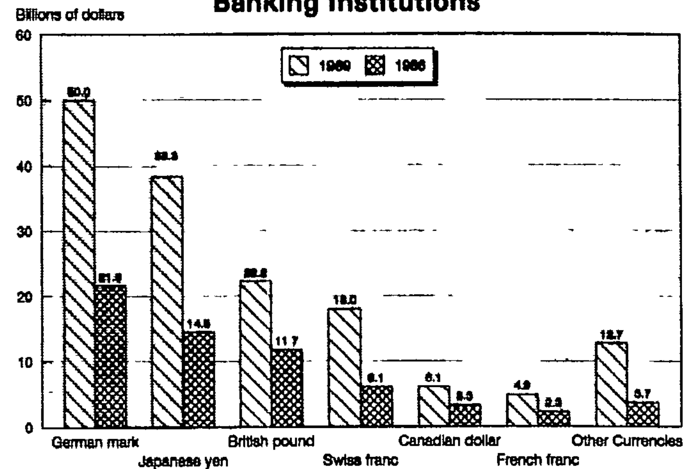
Currency Composition

The ranking of foreign currencies by transaction volume at banking institutions was unchanged from 1986. However, the currency rankings changed in the survey reports of brokers and nonbanks (see Charts on the next two pages and Appendix II(d)).

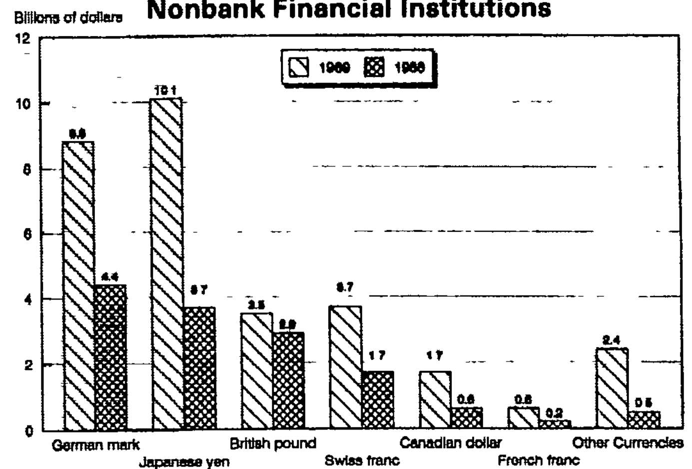
The trading volume of the **German mark** more than doubled between the 1986 and 1989 surveys, but trading in some other currencies increased even more. Thus the mark's percentage share of reported turnover decreased although it remained the most actively traded currency for both banks and brokers, accounting for nearly a third of these participants' business. Among the nonbanks, the mark moved back to second place in terms of volume.

AVERAGE DAILY FOREIGN EXCHANGE TURNOVER BY CURRENCY
(not adjusted for double counting)

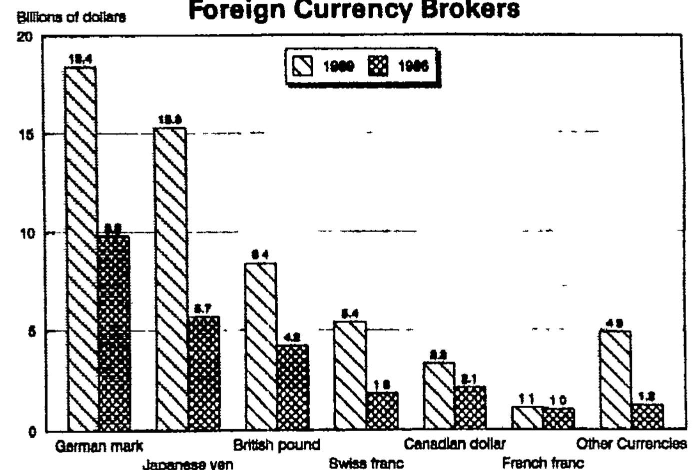
Banking Institutions



Nonbank Financial Institutions



Foreign Currency Brokers



The **Japanese yen** was the second most actively traded currency for banks and for transactions arranged through brokers. In the 1989 survey, the yen became the most actively traded currency for nonbank financial institutions.

The **British pound** registered declines in percentage shares of transactions reported by all three classes of survey participants. It maintained its rank as the third most actively traded currency for banks and through brokers while receding to become the fourth most actively traded currency for nonbanks.

The **Swiss franc** was the fourth most active currency in both the bank and broker markets and became the third most active for the nonbanks. The market share of the **Canadian dollar** declined for banks and brokers but increased for nonbanks. However, it remained the fifth most actively traded currency for all three classes of survey participants. The **French franc** remained the sixth most active currency among the banks but ranked seventh among the nonbanks and brokers behind the **Australian dollar**. The 1989 survey was the first to ask participants to report total turnover in the Australian dollar.

Respondents were also asked to specify each additional currency for which transaction volume exceeded $50 million during the survey period. The Italian lira and Dutch guilder were the most actively traded currencies included in this "other" group. Some of the additional transactions specified by banks, ranked in terms of volume, were the Danish krone, the New Zealand dollar, the Spanish peseta, the Swedish krone, the European Currency Unit, and the Belgian franc.

The 1989 survey was the first to ask participants to indicate their transaction volume of **cross-currency (or cross) trades**, that is, trades in which neither currency was the U.S. dollar. Total cross-currency volume reported by banks accounted for 3.6 percent of their total turnover. Such transactions accounted for 4.5 percent of the nonbank activity and 2.2 percent of the trades reported by brokers.

The most frequently traded currency in cross transactions was the German mark which was reported on one side of 95 percent of all such reported trades. The Swiss franc was involved in 28.2 percent of cross trades, the Japanese yen in 25 percent, and the British pound in 16.5 percent.

The German mark/Swiss franc cross trade accounted for 32.4 percent of the cross-currency transactions reported by banks, 12.6 percent reported by nonbanks, and 13.1 percent by brokers. German mark/Japanese yen trading accounted for 14.6 percent of the cross transactions reported by banks, 45.8 percent reported by nonbanks, and 33.8 percent by brokers. The German mark/French franc cross accounted for 19.2 percent of such transactions reported by banks, 15.3 percent reported by nonbanks, and 6.3 percent reported by brokers. The German mark/British pound cross accounted for 11.3 percent of the cross transactions reported by banks, 25.2 percent reported by nonbanks, and 18.6 percent reported by brokers.

Types of Transactions

In 1989, 63.9 percent of all foreign exchange trading reported by banks was in **spot contracts**, generally for delivery in two business days (see Table I). This percentage is slightly above the 63.2 percent share that spot trading held in 1986. As was the case three years ago, nonbank financial firms reported a smaller spot share than did banks. However, the difference narrowed as nonbank spot turnover grew to 55.7 percent from 49.7 percent. Brokers reported that trades involving spot contracts declined to 54.1 percent of all brokered transactions this year from 59.4 percent in 1986.

Respondents were asked to report **foreign exchange swaps** in which an institution simultaneously buys (sells) a currency for one value date and sells (buys) an equivalent amount for a later date. They were also asked to include foreign currency swaps in which payment streams at different interest rates in two currencies are exchanged. Such transactions accounted for 27.0 percent of banks' total turnover in 1989, declining 2.8 percentage points from 1986. For

TABLE I: DISTRIBUTION OF FOREIGN EXCHANGE TRADING BY TRANSACTION TYPE
(in percent)

Institution	Spot 1989	Spot 1986	Swap 1989	Swap 1986	Forward 1989	Forward 1986	Options 1989	Options 1986	Futures 1989	Futures 1986
Banks	63.9	63.2	27.0	29.8	4.2	4.7	4.3	0.9	0.7	1.4
Nonbanks	55.7	49.7	15.1	25.1	8.3	6.1	14.9	6.6	6.0	12.6
Brokers	54.1	59.4	42.3	39.8	0.3	0.8	3.3	n/a	n/a	n/a

nonbanks, the share of turnover represented by swap contracts decreased more markedly to 15.1 percent from 25.1 percent. Against this trend, swap contracts increased as a portion of brokered transactions, growing to 42 3 percent in 1989 from 39.8 percent in 1986. Swaps with a maturity of more than one year continue to account for a very small share (0.4 percent) of total bank and nonbank turnover.

The banks' trading of outright **forwards**, in which currencies are purchased or sold for future delivery, was down to 4.2 percent in 1989 from 4.7 percent in 1986. By contrast, forwards' share of nonbank turnover increased over the three years, to 8.3 percent from 6.1 percent. Forward contracts remain an insignificant part of the brokers' business.

The share of commercial banks' turnover accounted for by **foreign exchange options** increased nearly fivefold from 0.9 percent in 1986 to 4.3 percent in 1989 In these contracts a bank buys or sells the right — but not the obligation — to receive or deliver a specified amount of foreign currency at a predetermined price on or before a specific date. Currency options are either traded on an exchange or negotiated individually in the over-the-counter (OTC) market. The overall growth in options business was led by the surge of customized OTC contracts, which, for banks, grew to 3.5 percent from 0.4 percent of turnover. For nonbanks, the share of OTC options expanded to 6.7 percent in 1989 from 1.1 percent in 1986. In aggregate, options' share of nonbank turnover grew to 14.9 percent in 1989 from 6.5 percent in 1986, resulting in a current share over three times as large as that reported by banks. The brokering of options contracts, not reported in 1986, represented 3.3 percent of the brokers' turnover in 1989

In contrast, trading in **foreign currency futures** declined by half between 1986 and 1989 for both classes of market participants: to 0.7 percent from 1.4 percent for banks, and to 6.0 percent from 12.6 percent for nonbanks. In these transactions an institution buys or sells a standardized amount of foreign currency on an organized exchange for delivery on one of several specified dates. Obviously, the share of nonbanks' turnover in the futures market remains substantially above that of the banks.

Counterparties by Type of Market Participant

The **banks** reported that 82.0 percent of their total volume was with another bank, down from 86 3 percent in the 1983 survey (see Table II). The banks' data showed that the share of interbank trading arranged through brokers, as well as the portion of trades with foreign banks, were largely unchanged between the 1989 and 1986 surveys at approximately 45 percent and 21 percent, respectively.

The banks' trades with nonbanks, either non-bank financial institutions or others, increased to 13.0 percent of the banks' turnover from 11.5 percent three years earlier. Most of the increase reflected the growth of business with non-bank financial institutions.

The survey did not obtain a counterparty break down for over-the-counter options. Trading of these instruments represented less than 0 4 percent of the banks' turnover in the 1986 survey, but by this year, that share has grown to 3.5 percent. Informal interviews carried out with selected respondents indicate that the counterparty distribution of the banks' trading of OTC options is quite different from that

TABLE II: DISTRIBUTION OF FOREIGN EXCHANGE TRADING BY COUNTERPARTY
(in percent)

BANKS AND NONBANK FINANCIAL INSTITUTIONS

	1989		1986	
	Banks	**Nonbanks**	**Banks**	**Nonbanks**
Counterparty				
U.S. Banks, Direct	16 1	17.7	16.3	23.5
Banks Abroad, Direct	21 0	22.1	22.5	16 9
Banks, Through Brokers	42.2	14.5	44.4	17.6
Banks, Unspecified	2 7	4.5	3.1	3.7
Financial Firms				
Direct	5.4	14.3	6.9	11.5
Through Brokers	2.7	1.6	n/a	n/a
Non-Financial Firms	4 9	4.4	4 6	7.7
Organized Exchanges	1.4	14.2	1.9	18.0
Counterparty Not Specified				
OTC Options	3 5	6.7	0.4	1 1
Total	100.0	100.0	100.0	100.0

of other foreign exchange instruments, with just over half carried out with other banks and the rest with customers.

The portion of the banks' reported trades carried out on organized futures and options exchanges declined slightly between the two surveys to 1.4 percent from 1.9 percent.

For the surveyed **nonbank financial institutions**, 58.8 percent of their total turnover was conducted with banks, down from 61.7 percent three years before (see Table II). The share of transactions with nonbanks amounted to 15.9 percent, up from 11.5 percent.

The nonbank financial institutions' transactions in OTC options, for which the counterparty breakdown was not specified, increased sharply from 1.1 percent to 6.7 percent in the latest survey.

These institutions also reported a much higher proportion than the banks of trading on the organized futures and options exchanges, 14.2 percent of total turnover, although this was down from the 18 percent recorded on the last survey.

The data provided by **brokers** (see Table III) survey show that brokering of spot, forward, and swap trades between two banks in the United States increased slightly to 53.4 percent from 52.1 percent. Brokered trades between a U.S. bank and a bank abroad also increased slightly, to 32.4 percent from 30.0 percent. The share of their business involving a nonbank declined from 14.3 percent to 9.6 percent and brokered trades between two banks abroad fell from 3.5 percent to less than 1 percent. The counterparties for trades of options, reported by the brokers for the first time in this year's survey, were not specified.

Market Concentration

Foreign exchange turnover in the United States is spread relatively widely across many institutions and the extent to which activity is concentrated among the largest participants has not changed significantly between the last two surveys. In the 1989 survey, 12 institutions each commanded 2 percent or more of the total reported turnover compared to 13 in the 1986 survey. There were 31 institutions in 1989 and 30 in 1986 which each accounted for at least 1 percent of the market. The 10 largest reporters in this year's survey together accounted for 42.2 percent of total turnover compared with 43.7 percent for the largest ten in the previous survey.

TABLE III: DISTRIBUTION OF FOREIGN EXCHANGE TURNOVER
(in percent)

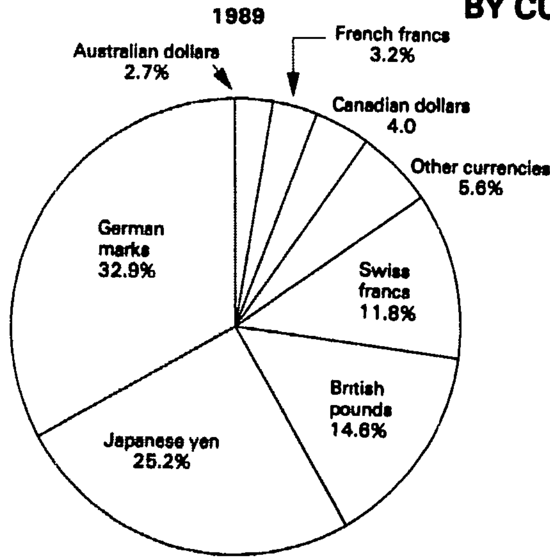
FOREIGN CURRENCY BROKERS

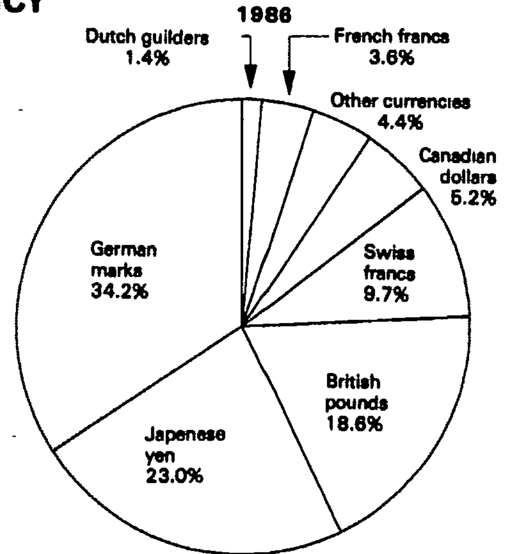
	Transactions Brokered Between:					
	Two U.S. Banks	U.S. and a Foreign Bank	Two Foreign Banks	Nonbank Institution*	Unspecified Counterparties**	Total
1989	53.4	32.4	0.9	9.6	3.7	100.0
1986	52.1	30.0	3.5	14.3	–	100.0

* Second counterparty could be a U.S. bank, a foreign bank, or a nonbank financial
** Counterparty not specified for Options and long-dated Swaps

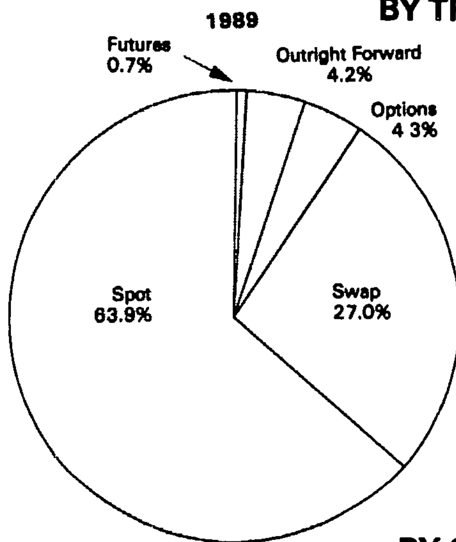
DISTRIBUTION OF FOREIGN EXCHANGE TURNOVER REPORTED BY BANKING INSTITUTIONS

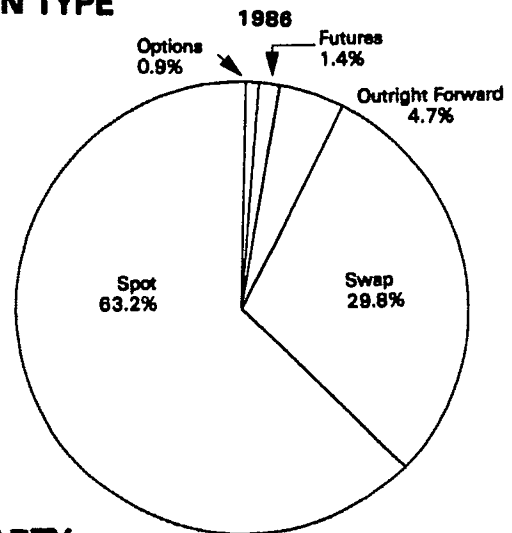
BY CURRENCY



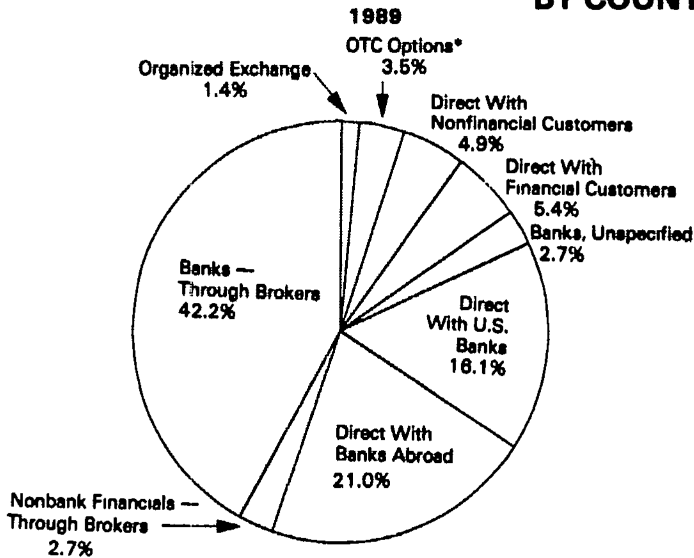


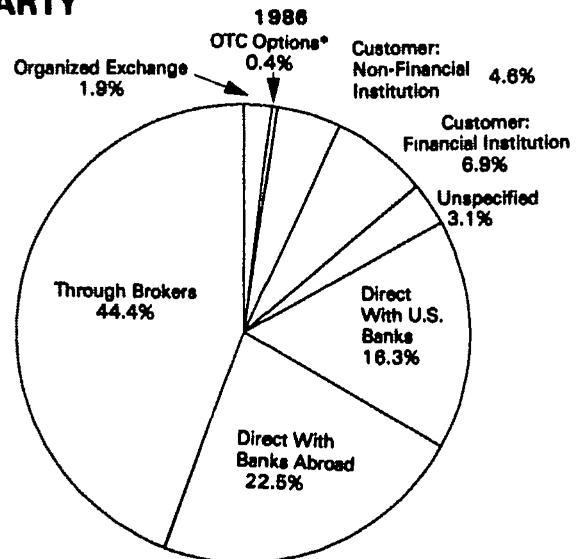
BY TRANSACTION TYPE





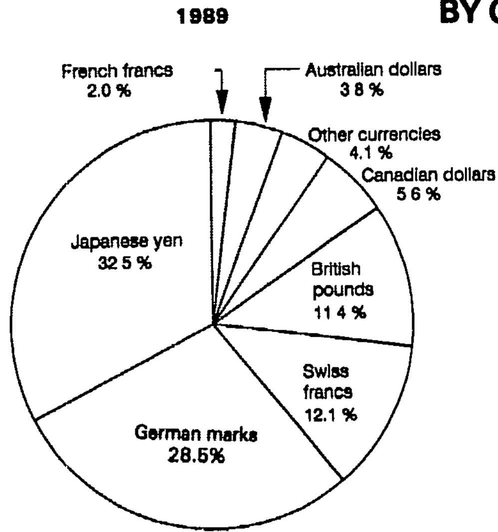
BY COUNTERPARTY

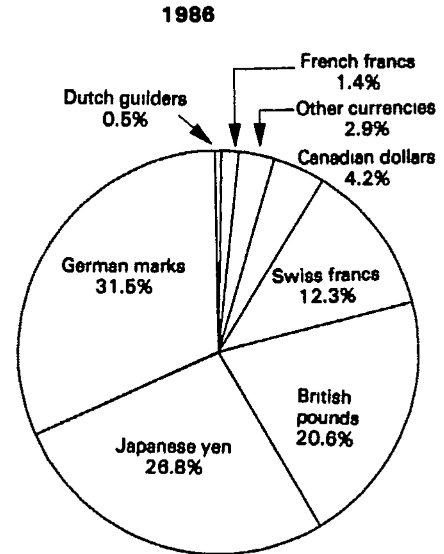




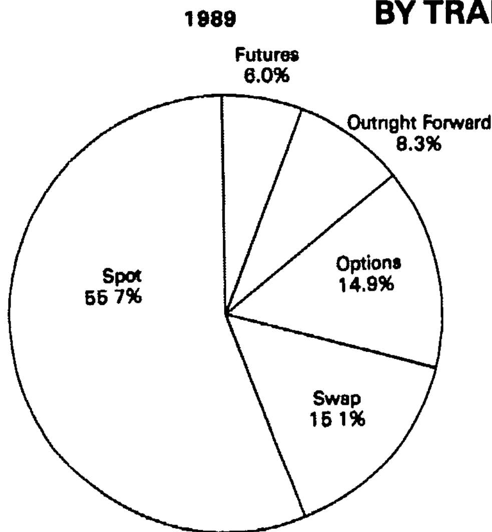
DISTRIBUTION OF FOREIGN EXCHANGE TURNOVER REPORTED BY NONBANK FINANCIAL INSTITUTIONS

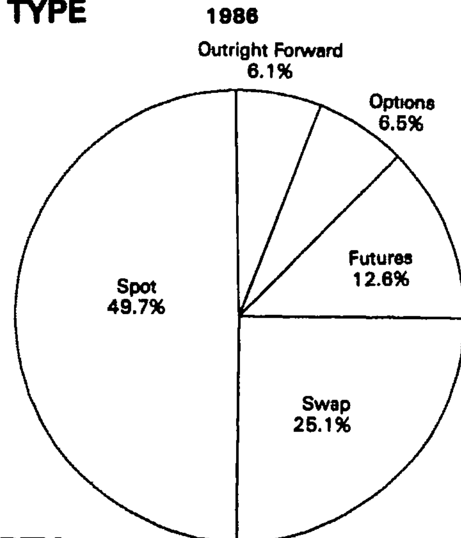
BY CURRENCY



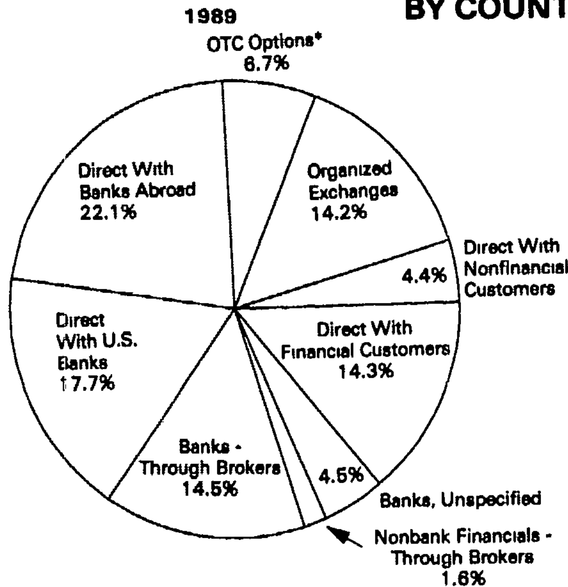


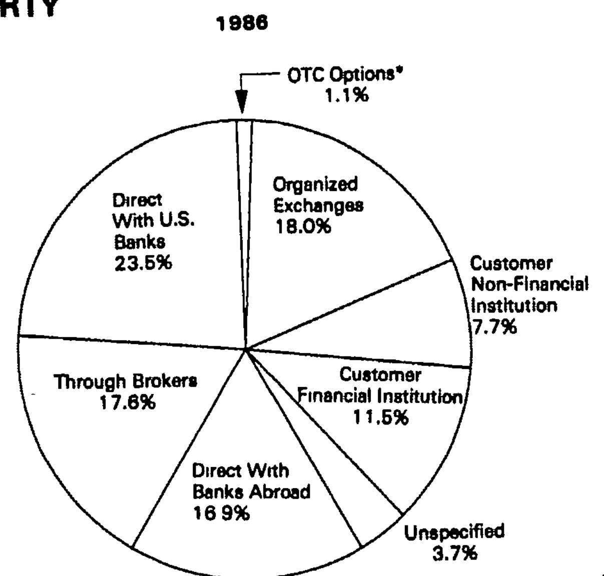
BY TRANSACTION TYPE





BY COUNTERPARTY

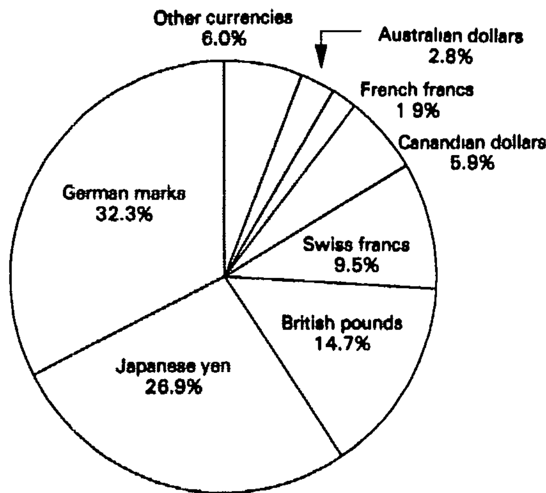




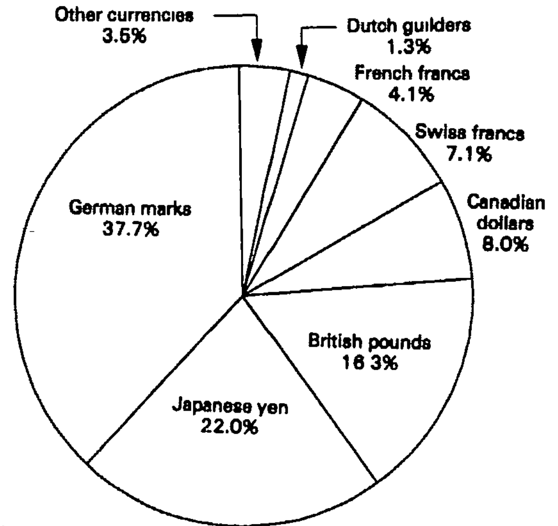
DISTRIBUTION OF FOREIGN EXCHANGE TURNOVER REPORTED BY FOREIGN CURRENCY BROKERS

BY CURRENCY

1989

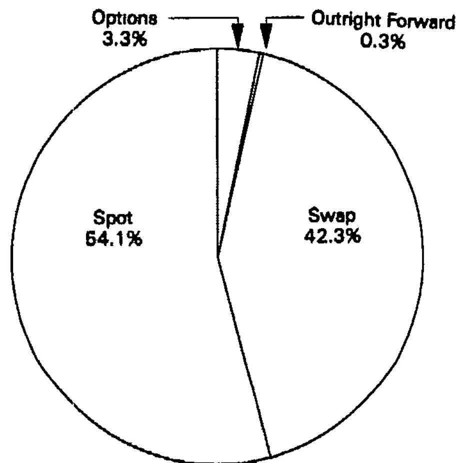


1986

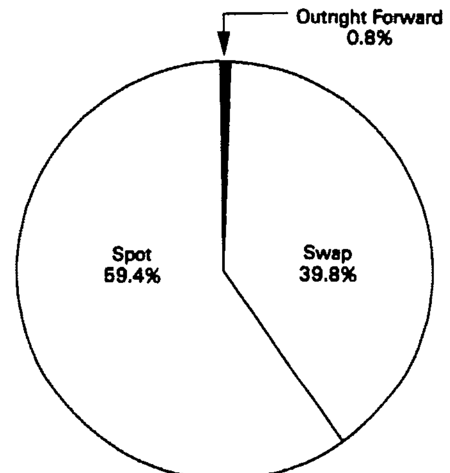


BY TRANSACTION TYPE

1989

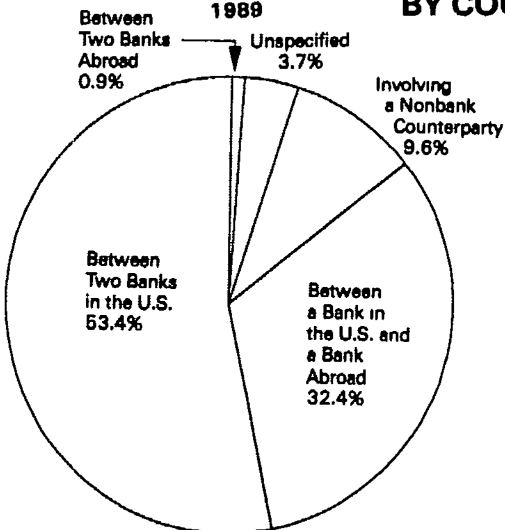


1986

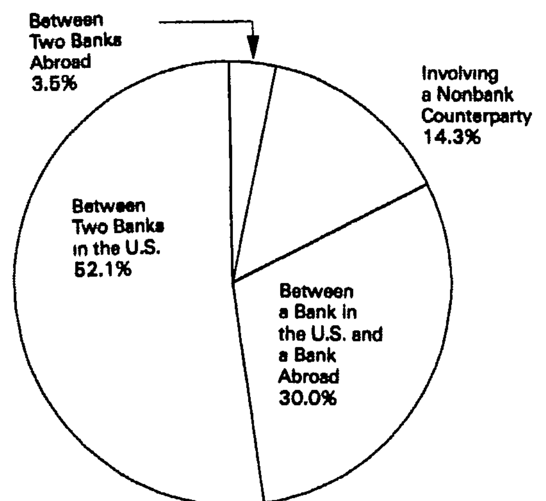


BY COUNTERPARTY

1989



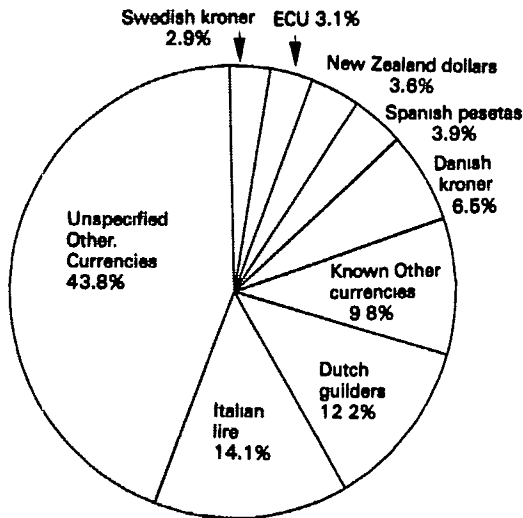
1986



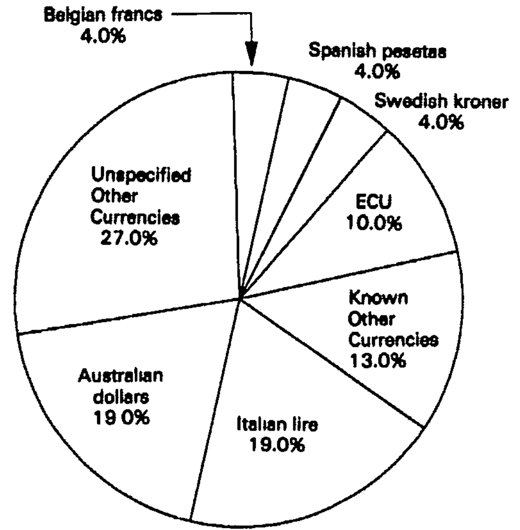
CURRENCIES IN THE OTHER CURRENCY COLUMN

BANKING INSTITUTIONS

1989

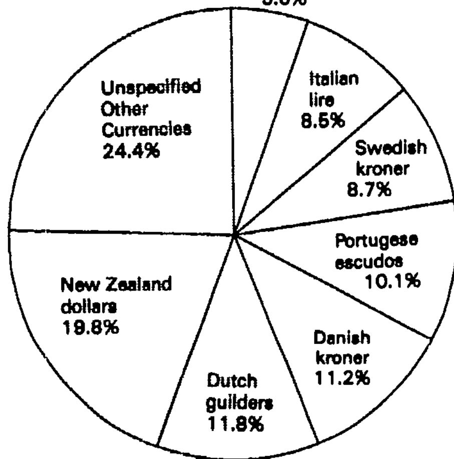


1986

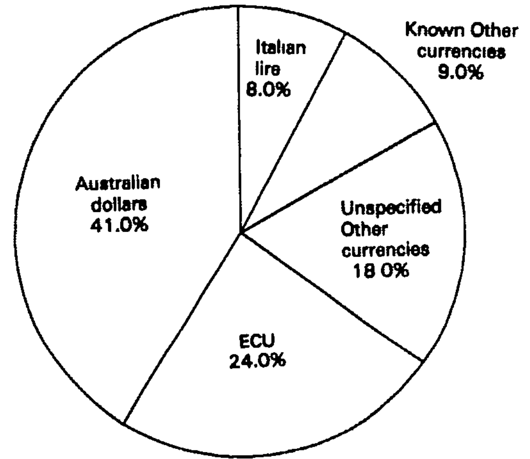


NONBANK FINANCIAL INSTITUTIONS

1989

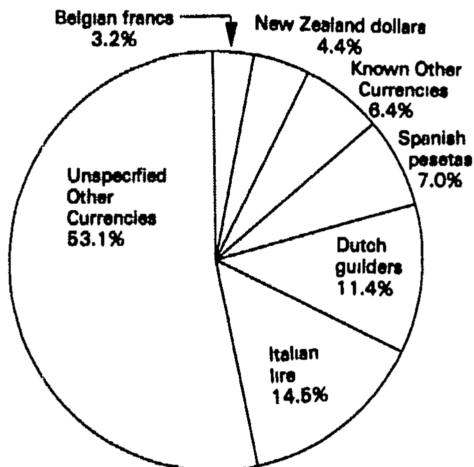


1986

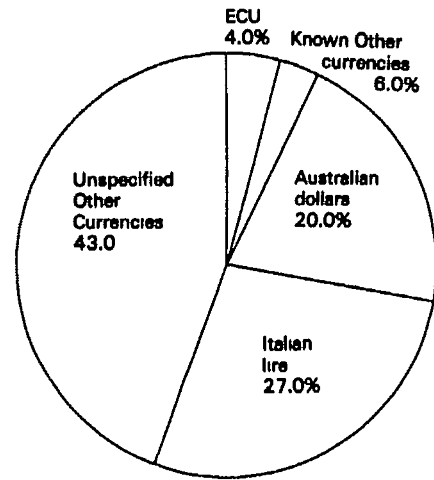


FOREIGN CURRENCY BROKERS

1989



1986



BANKING INSTITUTIONS

SUMMARY TOTALS BY TRANSACTION TYPE

(gross figures, not adjusted for double counting)

	GERMAN MARK	JAPANESE YEN	BRITISH POUND	SWISS FRANC	CANADIAN DOLLAR	FRENCH FRANC	AUSTRALIAN DOLLARS	OTHER	TOTALS
TOTAL TURNOVER	1,000,640	765,984	443,253	369,311	122,163	98,759	81,599	171,592	3,043,297
SPOT	739,240	435,165	284,185	243,555	61,092	59,669	39,085	82,525	1,944,906
SWAPS	186,424	237,227	126,229	82,443	48,886	33,202	32,939	73,304	820,753
FORWARDS	33,963	28,354	21,209	13,012	7,002	4,636	5,366	12,240	128,779
OPTIONS	35,760	58,136	8,684	16,118	3,962	1,253	3,961	3,367	130,251
INTERBANK	839,423	599,757	371,891	281,564	93,717	87,999	65,705	147,099	2,497,080
CUSTOMER	120,202	101,989	59,734	47,844	23,362	9,606	11,685	20,270	395,390
THROUGH BROKERS	436,891	349,659	196,185	131,006	50,979	45,051	23,213	50,447	1,283,239
CURRENCY SHARE	32.9	25.2	14.6	11.5	4.0	3.2	2.7	5.6	100.0

AGGREGATE REPORT ON TOTAL FOREIGN EXCHANGE TURNOVER

CATEGORIES OF TRANSACTIONS	GERMAN MARK	JAPANESE YEN	BRITISH POUND	SWISS FRANC	CANADIAN DOLLAR	FRENCH FRANC	AUSTRALIAN DOLLAR	OTHER	TOTALS
I. OUTRIGHT SPOT									
A. COMMERCIAL BANKS									
1 Direct with Banks in the U.S.	146,976	73,799	59,480	48,544	10,709	10,914	9,113	22,643	382,176
2 Direct with banks abroad	173,654	88,163	66,914	73,332	13,339	16,551	14,088	30,957	476,994
3. Through brokers	342,247	218,669	121,344	92,061	25,406	27,556	10,376	21,557	859,216
B NONBANK FINANCIAL INSTITUTIONS									
1 Direct	35,456	20,037	15,683	14,441	4,986	1,939	3,324	3,957	99,835
2. Through brokers	22,648	12,930	9,063	8,098	2,517	401	968	379	56,902
C ALL OTHERS	18,358	21,671	11,704	7,480	4,122	2,307	1,217	2,932	69,791
II. SWAPS									
A. MATURITY ONE YEAR OR LESS									
1. Commercial Banks									
a. Direct with banks in U.S.	25,796	28,816	11,158	11,896	6,097	4,976	8,612	10,899	108,250
b. Direct with banks abroad	33,518	40,317	22,902	17,177	9,328	7,434	8,211	23,956	162,842
c. Through brokers	94,444	131,090	74,851	38,948	26,572	17,495	12,835	28,790	424,024
2. Nonbank financial institutions									
a. Direct	10,168	11,050	6,854	4,028	2,867	1,101	1,516	1,984	39,563
b. Through brokers	6,138	5,004	3,277	4,016	1,687	976	638	1,776	23,511
3. All Others	11,096	17,829	5,649	5,148	3,100	896	716	4,493	49,126
B. MATURITY GREATER THAN ONE YEAR									
1 Commercial Banks	2,514	1,296	868	1,052	239	391	351	1,159	7,870
2. Nonbank financial institutions	423	370	317	262	82	29	84	136	1,683
3 All Others	328	457	155	223	5	0	24	110	1,302
III OUTRIGHT FORWARDS									
A. Commercial Banks	20,276	16,711	14,376	8,860	3,026	2,681	2,118	7,036	75,083
B. Nonbank Financial Institutions	5,531	5,902	2,176	1,629	1,792	781	1,889	1,986	22,685
C. All Others	8,156	5,741	4,659	2,523	2,184	1,172	1,359	3,218	29,011
IV FUTURES AND OPTIONS CONTRACTS									
A. FUTURES CONTRACTS	5,255	6,103	2,945	4,767	1,124	0	268	137	20,609
B. OPTIONS CONTRACTS									
1 Purchased									
a. Over-the-counter	14,597	27,161	3,930	5,557	1,476	563	1,379	2,047	57,089
b. Exchange traded	4,049	3,181	732	1,486	514	69	552	171	11,824
1 Sold (Written)									
a. Over-the-counter	13,129	22,871	3,611	6,228	1,518	602	1,502	894	50,353
b. Exchange traded	2,986	4,963	411	1,580	454	19	519	276	11,176
V TOTAL NUMBER OF DEALS	173,870	167,434	75,774	62,985	24,467	20,598	22,858	54,694	602,180

NONBANK FINANCIAL INSTITUTIONS

SUMMARY TOTALS BY TRANSACTION TYPE

(gross figures, not adjusted for double counting)

	GERMAN MARK	JAPANESE YEN	BRITISH POUND	SWISS FRANC	CANADIAN DOLLAR	FRENCH FRANC	AUSTRALIAN DOLLARS	OTHER	TOTALS
TOTAL TURNOVER	176,360	201,244	70,920	74,915	34,882	12,641	23,383	25,588	619,832
SPOT	90,428	109,033	41,639	43,440	21,955	8,551	15,077	15,221	345,344
SWAPS	26,346	29,467	10,495	7,975	5,763	2,445	3,849	7,057	93,395
FORWARDS	15,271	12,382	9,350	6,461	2,236	1,285	1,664	2,922	51,571
OPTIONS	33,849	36,659	6,872	9,499	2,811	260	2,714	388	92,052
INTERBANK	94,049	112,709	43,059	44,078	23,923	10,485	16,164	19,942	364,409
CUSTOMER	37,996	38,173	18,425	13,798	6,031	1,796	4,426	5,258	125,901
THROUGH BROKERS	33,512	20,469	12,308	14,304	3,772	1,414	2,798	1,329	89,906
CURRENCY SHARE	28.5	32.5	11.4	12.1	5.6	2 0	3 8	4.1	100.0

AGGREGATE REPORT ON TOTAL FOREIGN EXCHANGE TURNOVER

CATEGORIES OF TRANSACTIONS	GERMAN MARK	JAPANESE YEN	BRITISH POUND	SWISS FRANC	CANADIAN DOLLAR	FRENCH FRANC	AUSTRALIAN DOLLAR	OTHER	TOTALS
I OUTRIGHT SPOT									
A. *COMMERCIAL BANKS*									
1 *Direct with Banks in the U.S.*	17,542	44,249	6,045	6,651	5,756	917	5,396	2,707	89,263
2 *Direct with banks abroad*	26,060	31,571	15,927	16,956	10,433	6,523	5,804	11,361	124,636
3 *Through brokers*	27,533	17,306	10,010	11,707	3,002	660	1,536	499	72,263
B. *NONBANK FINANCIAL INSTITUTIONS*									
1 *Direct*	13,260	12,247	7,616	4,731	2,085	399	1,590	530	42,448
2 *Through brokers*	2,011	1,200	679	1,827	186	14	277	22	6,126
C. *ALL OTHERS*	4,022	2,460	1,462	1,567	483	48	474	102	10,618
II SWAPS									
A. *MATURITY ONE YEAR OR LESS*									
1 *Commercial Banks*									
a. *Direct with banks in U.S.*	6,364	5,469	2,696	1,559	1,710	622	915	1,171	20,505
b. *Direct with banks abroad*	2,709	3,983	1,221	565	1,182	352	503	1,748	12,263
c. *Through brokers*	5,979	3,163	2,298	2,597	770	754	1,262	630	17,653
2 *Nonbank financial institutions*									
a. *Direct*	6,530	14,194	2,744	1,761	1,420	193	948	2,265	30,055
b. *Through brokers*	1,273	1,419	52	535	76	16	75	89	3,535
3 *All Others*	3,400	968	1,445	925	598	606	134	906	8,872
B. *MATURITY GREATER THAN ONE YEAR*									
1 *Commercial Banks*	29	147	0	0	17	2	12	23	230
2 *Nonbank financial institutions*	35	124	39	0	0	0	0	25	223
3. *All Others*	27	0	0	13	0	0	0	0	40
III OUTRIGHT FORWARDS									
A. *Commercial Banks*	7,833	6,821	4,862	4,024	1,053	655	736	1,603	27,587
B. *Nonbank Financial Institutions*	5,183	3 671	2,070	2,175	907	502	798	742	16,048
C. *All Others*	2,255	1,890	2,418	262	276	128	130	577	7,936
IV FUTURES AND OPTIONS CONTRACTS									
A. *FUTURES CONTRACTS*	10,466	13,702	3,564	7,542	2,117	0	79	0	37,470
B. *OPTIONS CONTRACTS*									
1 *Purchased*									
a. *Over-the-counter*	7,614	6,696	1,856	1,616	644	134	1,004	220	19,786
b. *Exchange traded*	8,911	10,392	846	3,199	684	3	481	8	24,523
2 *Sold (Written)*									
a. *Over-the-counter*	7,671	8,640	2,154	1,490	754	117	840	153	21,818
b. *Exchange traded*	9,653	10,932	1,016	3,193	729	6	389	7	25,925
V TOTAL NUMBER OF DEALS	56,354	41,904	18,401	37,865	7,446	1,301	4,688	4,963	172,924

FOREIGN CURRENCY BROKERS

SUMMARY TOTALS BY TRANSACTION TYPE
(gross figures, not adjusted for double counting)

	GERMAN MARKS	JAPANESE YEN	BRITISH POUND	SWISS FRANC	CANADIAN DOLLAR	FRENCH FRANC	AUSTRALIAN DOLLAR	OTHER	TOTALS
TOTAL TURNOVER	368,165	306,481	167,851	108,635	66,778	21,953	30,460	67,779	1,138,121
SPOT	237,330	162,458	82,066	78,631	17,795	10,243	11,847	16,160	616,548
SWAP	115,895	130,388	81,069	25,619	47,805	11,195	17,913	52,290	481,974
FORWARD	270	1,599	1,072	0	85	0	64	0	3,090
OPTIONS	14,890	12,036	3,624	4,385	1,093	515	636	329	37,509
BETWEEN TWO U.S. BANKS	211,487	175,252	78,296	52,692	30,207	10,490	11,874	37,858	608,156
BETWEEN TWO FOREIGN BANKS	2,869	2,895	1,636	1,154	274	252	851	429	10,539
BETWEEN A U.S. BANK AND A FOREIGN BANK	103,983	91,305	65,728	31,046	26,461	9,665	12,599	27,749	368,536
WITH A NONBANK COUNTERPARTY	33,757	24,353	16,662	19,099	8,316	1,021	4,450	1,393	109,071

AGGREGATE REPORT ON TOTAL FOREIGN EXCHANGE TURNOVER

	GERMAN MARK	JAPANESE YEN	BRITISH POUND	SWISS FRANC	CANADIAN DOLLAR	FRENCH FRANC	AUSTRALIAN DOLLAR	OTHER	TOTALS
I SPOT									
A. BETWEEN 2 BANKS IN U.S.	151,677	107,710	40,347	42,840	7,244	4,498	4,043	8,520	366,679
B. BETWEEN 2 BANKS ABROAD	2,147	838	578	941	54	183	757	145	5,641
C. BETWEEN BANKS IN U.S. & ABROAD	61,763	39,127	29,209	22,149	7,456	5,046	5,271	5,920	175,940
D. WITH A NONBANK COUNTERPARTY	21,743	14,784	11,952	12,902	3,041	515	1,776	574	67,288
II SWAPS									
A. MATURITY OF ONE YEAR OR LESS									
1 BETWEEN 2 BANKS IN U.S.	59,697	67,181	37,671	10,053	22,953	5,991	7,831	29,337	240,714
2 BETWEEN 2 BANKS ABROAD	711	2,039	883	213	220	59	69	284	4,488
3 BETWEEN BANKS IN U.S. & ABROAD	42,100	51,423	35,958	8,898	18,930	4,619	7,269	21,829	191,046
4 WITH A NONBANK COUNTERPARTY	11,987	9,106	4,672	6,197	5,274	506	2,674	819	41,235
B. MATURITY GREATER THAN ONE YEAR	1,200	639	1,886	258	428	10	50	21	4,491
III OUTRIGHT FORWARDS									
A. BETWEEN 2 BANKS IN U.S.	113	361	278	0	10	0	0	0	762
B. BETWEEN 2 BANKS IN ABROAD	10	20	175	0	0	0	25	0	230
C. BETWEEN BANKS IN U.S.& ABROAD	120	755	561	0	75	0	39	0	1,550
D. WITH A NONBANK COUNTLRPARTY	27	463	58	0	0	0	0	0	548
IV OPTIONS CONTRACTS	14,890	12,036	3,624	4,385	1,093	515	636	329	37,509
V TOTAL NUMBER OF DEALS	67,504	51,039	23,763	22,798	8,561	3,861	7,972	9,579	195,075

GROWTH IN FOREIGN EXCHANGE TURNOVER BY CURRENCY

MARCH 1986 TO APRIL 1989

(Daily Turnover - Not Adjusted for Double Counting)

AMONG BANKING INSTITUTIONS

BANKS REPRESENTED ON BOTH SURVEYS
(millions of dollars)

	1989	1986	% Growth
German Marks	45,932	21,372	114.9
Japanese Yen	35,125	14,445	143.2
British Pounds	21,158	11,647	81.7
Swiss Francs	16,440	6,031	172.6
Canadian Dollars	5,932	3,218	84.4
French Francs	4,868	2,223	119.0
Other Currencies	10,677	3,658	191.9
Total	140,133	62,595	123.9
Sample Size (# of responses)	104	104	

BANKS REPRESENTED ON EITHER SURVEYS
(millions of dollars)

	1989	1986	% Growth
German Marks	50,032	21,564	132.0
Japanese Yen	38,299	14,508	164.0
British Pounds	22,163	11,715	89.2
Swiss Francs	17,966	6,094	194.8
Canadian Dollars	6,108	3,255	87.7
French Francs	4,988	2,291	115.6
Other Currencies	12,660	3,684	243.6
Total	152,165	63,111	141.1
Sample Size (# of responses)	148	123	

AMONG NONBANK FINANCIAL INSTITUTIONS

NONBANKS REPRESENTED ON BOTH SURVEYS
(millions of dollars)

	1989	1986	% Growth
German Marks	7,289	3,119	133.7
Japanese Yen	8,536A	2,260	277.8
British Pounds	3,254	2,292	41.9
Swiss Francs	3,050	1,330	129.3
Canadian Dollars	1,647	375	339.4
French Francs	579	150	285.8
Other Currencies	2,269	334	579.6
Total	26,623	9,860	170.0
Sample Size (# of responses)	8	8	

NONBANKS BANKS REPRESENTED ON EITHER SURVEYS
(millions of dollars)

	1989	1986	% Growth
German Marks	8,818	4,367	101.9
Japanese Yen	10,062	3,724	170.2
British Pounds	3,546	2,859	24.0
Swiss Francs	3,746	1,701	120.2
Canadian Dollars	1,744	577	202.2
French Francs	627	190	230.4
Other Currencies	2,449A	463	428.5
Total	30,992	13,882	123.3
Sample Size (# of responses)	14	13	

LIST OF BANKING INSTITUTIONS, NONBANK FINANCIAL INSTITUTIONS AND BROKERS

Participants in the April 1989 Survey of Turnover in the U.S. Foreign Exchange Market

(• Indicates that the institution participated in the 1986 survey)

BANKING INSTITUTIONS

• Algemene Bank Nederland N.V.
• American Express Bank
American Express Traders Co.
• American National Bank and Trust
American Scandinavian Banking
• Amsterdam-Rotterdam Bank
Arab African International
Australia and New Zealand
• Banca Commercial Italiana
• Banco di Roma, Chicago
Banco di Roma, New York
• Banco di Sicilia
• Banco do Brasil S.A.
Bank fur Gemeinwirtschaft
Bank Julius Baer
• Bank of Boston, Connecticut
• Bank of Boston Corporation
• Bank of Boston International
• Bank of Ireland
• Bank of Montreal
• Bank of New England
• Bank of New York
• Bank of Nova Scotia
• Bank of Tokyo, Ltd., New York
• Bank of Tokyo, Ltd., San Francisco
• BankAmerica Corporation
• Bankers Trust Company
• Banque Francaise du Commerce Exter
• Banque Indosuez
• Banque Nationale de Paris
• Banque Paribas
• Barclays Bank PLC
Bayerische Hypotheken
• Bayerische Landesbank
• Bayerische Vereinsbank AG
• Berliner Handels & Frankfurter Bank
Boatmen's National Bank
• Brown Brothers Harriman & Co.
• Caisse Nationale de Credit Agricole
• Canadian Imperial Bank of Commerce
Cassa di Risparmio
• Chase Manhattan Bank
• Chemical Bank
Christiana Banking Corporation
• CIC-Union Europeene
• Citicorp
• Comerica Bank-Detroit
• Commerzbank, Chicago
• Commerzbank, New York
Commonwealth Bank of Australia
• Connecticut National Bank
• Continental Illinois
Copenhagen Handelsbank, New York
• Credit Lyonnais
• Credit Suisse
• Creditanstalt-Bankverein
• Credito Italiano
• Dai-Ichi Kangyo Bank, Ltd.
• Daiwa Bank, Ltd.
Den Danske Bank
• Den Norske Creditbank
• Deutsche Bank
Deutsche Genossenschaftbank, Chicago
• Deutsche Genossenschaftbank, NY
• Dresdner Bank
• European American Bank
Fidelity Bank
• First American Bank
• First Bank National Association
• First Interstate Bank, CA
• First National Bank of Chicago
• First Pennsylvania Bank
First Union National Bank
• First Wachovia Corporation
• Fleet National Bank
Fuji Bank, Chicago
Fuji Bank and Trust Company
• Fuji Bank Ltd, New York
Fuji Bank Ltd, Los Angeles
Generale Bank, New York
Girozentrale Vienna
Hachijuni Bank
• Harris Trust and Savings Bank
• Hessiche Landesbank Girozentrale
Hokuriku Bank
• Hongkong & Shanghai Banking Co.
• Industrial Bank of Japan, Los Angeles
Industrial Bank of Japan, New York
• Irving Trust Company
• Lloyds Bank PLC
Long Term Credit Bank, Los Angeles
• Long Term Credit Bank, New York
• Manufacturers and Traders Trust Co.
• Manufactures Hanover
• Mellon Bank Corporation
• Merrill Lynch International
• Midland Bank PLC
• Mitsubishi Bank Ltd.
• Mitsubishi Trust & Banking, New York
• Mitsui Bank Ltd., New York
Mitsui Trust and Banking, Chicago
Mitsui Trust and Banking, Los Angeles
• Mitsui Trust and Banking, New York
• Morgan Guaranty Trust Co
• National Bank of Detroit
• National City Bank
• National Westminster Bank PLC
National Westminster USA
• North Carolina National Bank, Charlotte
• North Carolina National Bank, Texas
• Nippon Credit Bank
Norinchukin Bank
• Northern Trust Company
Osterreichische Landerbank
PBTC International Bank
Provinsbanken A/S
• Republic National Bank, New York
• Royal Bank of Canada
Royal Bank of Scotland
• Sanwa Bank, Ltd.
• Seattle First National Bank
• Security Pacific Bank, Washington
• Security Pacific Bank, Los Angeles
• Shawmut Bank of Boston
Shoko Chukin Bank, New York
Skandinaviska Enskilda
• Societe Generale
• Standard Chartered Bank PLC
State Bank of Victoria
• State Street Bank & Trust Company
• Sumitomo Bank Ltd.
• Sumitomo Trust & Banking
Swiss Bank Corporation, Chicago
• Swiss Bank Corporation, New York
• Swiss Bank Corporation, San Fransico
Texas Commerce Bank
Tokai Bank Ltd., Los Angeles
• Tokai Bank Ltd., New York
• Toronto-Dominion Bank
• Toyo Trust & Banking Co.
• Union Bank, Los Angeles
Union Bank of Finland
• Union Bank of Switzerland
• Wells Fargo & Company
• Westdeutsche Landesbank
Westpac, Chicago
• Westpac, New York
Westpac, San Francisco

NONBANK FINANCIAL INSTITUTIONS

Bear, Stearns Inc
Boston Safe Deposit & Trust Co
• Commodities Corporation
• Dean Witter Reynolds, Inc
• Discount Corporation of New York
• Drexel Burnham Lambert
• First Boston, Inc.
First Options, Inc.
GNP Securities
• Goldman, Sachs & Company
Lazard Freres & Company
• Morgan Stanley & Company, Inc.
Paine Webber, Inc
• Shearson Lehman Hutton, Inc.

FOREIGN CURRENCY BROKERS

Berisford Capital Markets, Inc.
• Bierbaum-Martin, Inc.
• Debeausse & Company
• Fulton Prebon Money Brokers
GFI Group Inc.
Global Centrex Corporation
• Harlow, Meyer, & Savage
• Lasser Marshall Inc.
• Noonan, Astley, & Pearce
Rada Foreign Coporation
Tradition Financial Service
Tullet & Tokyo Forex, Los Angeles
• Tullet & Tokyo Forex, New York
• Wallich Matthes

GUIDELINES FOR THE MANAGEMENT OF FOREIGN EXCHANGE TRADING ACTIVITIES

The U.S. foreign exchange market has changed significantly in recent years. More sophisticated communications systems have provided access to greater numbers of institutions throughout the world, prompted wider use of off-site and around-the-clock trading, and contributed to sharp growth in turnover. New financial instruments have introduced complexities to dealing that did not previously exist.

With changes in the market have come changes in the institutions operating there. A number of new participants have joined the market, bringing with them different practices and perspectives. Existing firms have been forced to adapt or modify traditional procedures. Foreign exchange units, once operated almost strictly as a service for customers, can today be major profit centers for banking institutions. Accordingly, management objectives have changed to place more attention and emphasis on profitability.

Growth and change are also affecting the individuals acting within the market. An influx of new people, not necessarily familiar with the specific traditions of the foreign exchange market, has altered the tone of the marketplace. More aggressive trading for profit and the growing importance of incentive-based compensation programs have increased pressure on individuals, pressure compounded by the fast pace and increasing size of the trades themselves. Partly in response to these developments, the turnover of personnel has risen, and individual traders have become increasingly specialized.

In acknowledgement of these trends, the Foreign Exchange Committee updated and expanded its 1980 Management Guidelines for Foreign Exchange. The Committee is especially concerned that managements recognize how change has affected and will continue to affect their own operations.

Most importantly, management should realize the growing responsibility that is now delegated to the individual trader. He not only can commit substantial resources of the institution but is relatively independent in doing so. More dispersed operations, the greater number and size of transactions, and greater specialization among individuals have all contributed to an environment in which there is less support for the trader in the form of oversight or timely suggestions from other experienced personnel. Implicitly, institutions place tremendous faith on each individual's ability and willingness to operate in accordance with institutional policies and regulations.

The Committee advises management to weigh these considerations seriously when making hiring or assignment decisions. The Committee firmly believes that by attracting and retaining quality personnel, institutions will protect their own standards of performance. They will also contribute to the maintenance of a professionally sound and smoothly functioning foreign exchange market, a goal that all market participants share.

Some specific issues relating to the management of foreign exchange activities the Committee finds to be particularly topical are discussed more fully below. In revising its guidelines, the Committee focused its attention especially on the requirements of a foreign exchange trading operation. Many of the points discussed are, however, general enough to apply to trading operations for other closely-related instruments.

Confidentiality

Confidentiality and anonymity are essential to the operation of a professional foreign exchange market. Participants in the market — commercial accounts and banks alike — can expect to have their interest and activity known only by the other party to the transaction and an intermediary if one is used.

Management is responsible for ensuring that its employees can readily identify information that is confidential or situations where anonymity is essential. Management should also instruct its employees to handle such information accordingly. In the normal course of his duties, a trader has access to a considerable amount of confidential information. In addition to the details of the trades he executes, he may know of confidential material prepared within his own organization or obtained from those with whom his institution does business. Such information might pertain directly to the foreign exchange market or to other markets. While not explicitly stated to be confidential, it may not be publicly available.

Whenever confidentiality is broken, it is the role of management to see to it that the institution moves swiftly to correct the conditions that permitted such an event to occur.

Managers should not tolerate a trader utilizing confidential material for personal benefit or in a manner that compromises the institution in any fashion. A trader should not be permitted to pass on information outside his institution. Nor should a trader distribute information within his institution, except on a need-to-know basis.

Management should also be alert to the possibility that the mechanics of foreign exchange trading might jeopardize the institution's attempt to preserve confidentiality. When the Foreign Exchange Committee issued its original guidelines in 1980, a procedure that generated considerable concern and subsequent discussion about confidentiality was the use of two-way speakerphones by both brokers and dealers. Since then two-way speakerphones have either been abandoned or, where still in use, have been controlled so as to maintain the level of confidentiality appropriate to executing transactions.

As technological innovations are introduced into the trading environment, management should be aware of the security implications of any changes. In today's market, the widespread use of computers represents a case in point. Much of the information stored there is highly sensitive. It should be protected. Access should be strictly controlled and monitored. All necessary steps should be taken to protect confidential materials from potential breaches, inadvertent or otherwise.

Visitors to the dealing or brokerage operation may present yet another complication in the attempt to ensure confidentiality. There is always the possibility that visitors will overhear information not intended for them; names of participants, amounts of trades, and currencies traded may be disclosed. Whether or not that information is ever put to use, and however unintentional the distribution of that information, the simple fact that the presumed confidentiality between counterparties has been violated is grounds for concern.

Accordingly, management might consider whether visits to individual operations are appropriate. If so, management should move to protect sensitive information. When allowed, visits should be prearranged. Similarly, visitors should be accompanied by an employee of the host institution. It is strongly recommended that a visitor not be permitted to trade for his own institution from the premises of the host.

Trading for Personal Account

In general, managers expect that any trader will give full attention to the employing institution's business activities, not distracted by his own personal financial affairs. Management also expects that any trader will fulfill his institutional responsibilities objectively, unbiased by his own financial position.

Management should be aware that, if traders are permitted to deal for themselves in instruments closely related to the ones they deal for the institution, a conflict of interest or an appearance of a conflict of interest might arise that could be detrimental or embarrassing for the institution, the trader, or both. Therefore, it is management's responsibility to develop and to disseminate a clear institutional policy on these matters. In that regard, most institutions require the explicit permission of senior management whenever a trader engages in a transaction for his own account, either in the instrument he deals for the institution or one closely related to it.

Traders should recognize that they, too, have a responsibility for identifying and avoiding conflicts or appearances of conflict of interest. In particular, a trader should bring to management's attention any situation about which there is a question of propriety. In no instance should a trader use the resources of his professional affiliation to facilitate or to create trading opportunities for personal gain.

Entertainment/Gifts

Because of the nature of the money and exchange markets and the manner in which business is conducted in these markets, close personal ties may develop between professionals. Close contacts among market participants can be constructive to the extent they contribute to the smooth functioning of the market. There is a risk, however, that these ties may tempt a trader to assist a fellow practitioner at the expense of the employer.

Traders, unlike many others within an organization, are in a position directly to reciprocate gifts, entertainment and favors by the way they direct the business they execute for their institution. Management should therefore assure itself that general guidelines its institution may have concerning entertainment and the exchange of gifts are sufficient to address the particular circumstances traders may encounter. Where appropriate, the general guidelines should be supplemented for trading personnel to help dealers avoid the dangers of excessive entertainment. Special attention needs to be given to the style, frequency, and cost of entertainment afforded traders. A mechanism for monitoring entertainment should be in place. Although it is customary for a broker or trader to entertain market contacts at lunch or

dinner on occasion, entertainment even in that form becomes questionable when it is underwritten but not attended by the host.

In turn, traders should conduct themselves in such a way as to avoid potentially embarrassing situations and to reduce the chances of incurring a presumption of indebtedness. They should fully understand their institution's concept of what constitutes an appropriate gift or entertainment as well as the bounds of law and reasonable propriety. They should also be expected to notify management regarding unusual favors granted them by virtue of their professional position.

Personnel Issues for Management

In recent years the work environment for trading personnel has changed in some very important respects:

- The stress and pace of work for traders has become increasingly intense. They are operating under strong internal pressures to make profits in a market that is open 24 hours a day.

- The process of developing a trader has become far more compressed. Seldom do individuals learn trading over a period of years, by starting with purely clerical tasks and gradually — under the tutelage of a seasoned and experienced foreign exchange professional — taking on more responsible tasks. Today, traders are either hired from other institutions, or they are developed internally from individuals thought to have either on-the-job experience or academic training in areas that would prepare them quickly for market-making and/or position-taking activities.

These changes raise new issues for management to consider and require new responses, some of which are specifically mentioned here.

Stress. Stress may lead to job-performance problems. Managers need to be able to identify symptoms of stress among their trading personnel. An institution should have the ability to respond to any incipient problem, even if doing so means that foreign exchange managers may have to be more flexible in their approach to personnel issues than is generally the case for the organization as a whole.

Drug Abuse. Drugs, as well as other mind-altering substances, can be debilitating and affect the user's judgment. They can also produce a need or dependency that may influence a user's professional conduct in other ways. The apparent ease of distribution and the changing nature of the substances used make it difficult for management to recognize incidents where drugs may be involved.

Management should educate themselves and their traders to signs of use and to the potential damage incurred by drugs and other abused substances. Management would thereby be in a better position to detect possible use in the organization.

Policies and Procedures of the Organization. Increased mobility of dealing personnel within the financial industry has a material effect on the dealer's perception of his relationship to his employer. It is more possible today than before to have a dealer trading an instrument for an institution without having either an intimate knowledge of the traditions and practices of that market or the traditions and corporate culture of his current employer. This situation can give rise to misunderstandings about what management expects of its traders.

Management should ensure that each trader is fully acquainted with the policies, procedures and style that the institution chooses to employ in the conduct of its business. This task is made more difficult by the high level of turnover that now exists among trading personnel. Management should consider providing complete orientation procedures for new employees of all levels and formal procedures to ensure periodic review of the institutions's rules and policies by each trader.

Trading Practices

Traders' Responsibility for Prices, Credit Guidelines. In the conduct of dealing, traders quote prices directly to customers or, in the interbank market, to other dealing institutions either directly or through the intermediary of brokers Traders are expected to distinguish which counterparties represent acceptable names for doing business and to operate with those counterparties in accordance with management's policies and procedures. In making a price, the trader is expected to deal with an acceptable name at the price he quoted within a reasonable period of time; his counterparty is expected to respond within a reasonable period.

Need to Avoid Questionable Practices. At times when markets are unsettled and prices are volatile, opportunities may arise for traders to engage in practices which may realize an immediate gain or avoid a loss, but which may be questionable in terms of a trader's reputation—as well as that of the bank—over the long run. The kinds of questionable

practices are many. Some, like the perpetrating of rumors, may reflect adversely on the professionalism of the dealer. Others, like the reneging on deals, may give rise to liability.

Management should be alert to any pattern of complaints about a trader's behavior from sources outside the institution such as from customers, other banks, or intermediaries. Information available within the organization should be reviewed to determine 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.

Off-Market Rates. Counterparties from time to time may ask a dealer to use an "off-market" exchange rate. Such a request arises most frequently in connection with swap transactions when there can be a discussion about whether the "current" or "historical" rate is to be applied. To be sure, the essence of a swap transaction is neither the spot nor the forward rate *per se,* but the relationship between the two.

Even so, any use of "off-market" rates should raise questions of propriety and perhaps policy issues for the bank. Use of non-market rates may in effect move income from one institution to another (perhaps over an income reporting date) or alter the timing of reported taxable income. Since use of historical rather than market rates can in any case result in an extension of unsecured credit to the counterparty, all such requests should be referred to management for policy and credit judgments as well as for guidance on appropriate accounting procedures. While the nature of certain commercial transactions may justify the use of historical rates with selected customers, use of "off-market" rates with other banks should be considered highly exceptional

Trader-Trader Relationship

For several years, banks have been dealing directly with each other, at least at certain agreed-upon times during the dealing day. The nature of the direct dealing relationship will vary according to the interests of the two parties. Management should be sure that the terms of each relationship are clearly understood and acceptable to both institutions, and are being respected in fact by the way their traders conduct themselves.

A possible element of a direct dealing relationship between two banking institutions is reciprocity. That is, each bank of the direct dealing pair may agree to reciprocate upon request in providing timely, competitive rate quotations for marketable amounts when it has received such a service from the other. Differences in the relative size of the institutions, together with their expertise or specialization in certain currencies, will influence what is perceived by the two parties as an equitable reciprocity. If there are to be limitations to reciprocity, or times of the day when the two do not wish to be bound by the obligation of reciprocity, the limitation should be explicitly agreed upon in advance by the two parties.

Management should analyze trading activity periodically. Any unusually large concentration of direct trading with another bank or banks should be reviewed to assure that the level of activity is appropriate.

Trader-Broker Relationship

The use of brokers is a longstanding feature of the foreign exchange market in the United States. By providing participants anonymity until a transaction's size and exchange rate is agreed to, brokers contribute to the depth and breadth of the market. A brokers' market can function smoothly, however, only if most participants in that market can be reasonably confident that virtually all counterparties contacted through brokers will meet certain minimum standards of creditworthiness and professionalism.

A basic contribution that each institution using brokers can make in this regard is to assure itself that its name is acceptable to enough of the participants in the brokers' market that its actions do not contribute to "name" problems. From time to time, entities using the brokers' market are not broadly regarded as acceptable counterparties. If a broker proposes a transaction on behalf of such an entity, it is appropriate for that broker to make potential counterparties aware that the transaction may need to be referred to management for credit approval — that is, that the transaction may be "referable" — before the transaction can be agreed to. Brokers cannot be expected to make credit judgments for banks. But they are in a position to know what entities, if any, are consistently difficult to place and have a responsibility for indicating to potential counterparties if a price they are currently showing is on behalf of such an entity. Those institutions whose names are not sufficiently acceptable might consider whether it is appropriate or even in their long-run interest to continue to use brokers.

Brokers with links to affiliated firms overseas can also contribute by making greater efforts to ascertain whether a bid or offer price, that is communicated to it by an overseas affiliate for dissemination here, has been initiated by an

institution that might be an unacceptable or unrecognized counterparty to many of the broker's U.S. clients. In this instance, the broker should indicate that the institution may either be referable or unknown, even if the overseas brokers do not do so. Further, brokers should apprise any client regarding the name recognition and credit line problems that it might face in executing transactions through a broker.

For those institutions that use brokers' services, foreign exchange managers should themselves maintain contact with their counterparties at each individual brokerage firm to establish and monitor the brokering relationship. Brokers and their customers should be satisfied that all of the terms and conditions of the brokerage service being rendered are mutually agreeable, that the nature and extent of entertainment are appropriate, that the broker treats his clients' business with discretion, and that any aspect of the relationship can be reviewed by either party at any time. Management will find that brokers welcome frank and constructive conversations on such matters.

In addition, bank management needs to establish and clearly communicate internal policies and procedures covering the way its dealers should do business with brokers, as well as the way any disputes between the two are to be resolved. In so doing, management needs to be aware of areas of tension that arise between bank dealers and brokers.

One recurring source of difficulty occurs when a dealer discovers that a transaction he thought he had agreed to is not consummated by the broker at the agreed price. Such a situation may occur because the price was simultaneously canceled, because the amount being presented at that price was insufficient to cover the amount of the dealer's transaction, or because the broker received multiple and simultaneous responses to the original bid or offer.

Whenever a trade is aborted, it may be impossible for the broker to find another counterparty at the original price. Most dealers in this situation are prepared to cancel their price if a broker cannot conclude the transaction within a reasonable time or do at least a part of the original transaction at the agreed price. But, if the trader insists that the original transaction be fully honored, the broker is forced to assume market risk.

When forced to assume market risk, the broker may respond in two ways, each entailing undesirable consequences. He may deal at the next available price, passing on to the trader any profit that would result from a favorable movement in exchange rates and protecting the trader from any potential loss by remitting a difference check if there were an adverse movement in market rates. (Sometimes when the loss accruing to the broker is substantial and he requests time to try to reduce his loss, the transaction may be left open and the difference check deferred for several hours.) Alternatively, the broker may request a trader from another institution to deal at an off-market rate. Should this second trader agree, the broker would "owe points" to the second trader, which he would have to repay one way or another.

The Committee has expressed grave concern about any practice that, in effect, forces the broker in a role as principal to a foreign exchange transaction, of managing a foreign exchange position, or otherwise compromising the neutrality of the broker. (See Foreign Exchange Committee's paper "Name Substitution Practices in the United States Foreign Exchange Market" in this Committee's Annual Report of 1982.) Foreign exchange brokering firms are often not capitalized to an extent appropriate to accept the risk of being put into those situations routinely. Moreover, the obligations which brokers are presumed to assume under some of these arrangements may not have a clear legal basis. Bank management should be aware of these practices, determine if and under what circumstances dealers of their institutions should engage in them, insist upon a speedy resolution of any dispute, and ensure there are adequate controls to detect a lack of compliance with bank policy.

To the extent that such practices do continue in the foreign exchange market in the United States, for reasons of operational convenience and market efficiency, their frequency should be reduced to those situations that do not readily allow for alternative methods of resolution. Although difficulties are bound to occur on occasion, there is likely to be a relationship between the frequency of these problems and questions regarding the reputations of the individuals or concerns involved.

The practice of "owing points" developed in order to permit brokers a way of resolving difficult situations. Some banks prefer to receive a difference check than to permit their dealers to trade in brokers' points. Whatever an institution's policy may otherwise be, under no circumstance should a trader request or a broker agree to "lend points" to a trader or otherwise facilitate a trader's effort to deal at an off-market price in order to hide a trading loss or inflate his profit. Management of brokerage firms should discourage this type of behavior.

A trade may also be aborted because of a "name" problem. That is, one party may indicate that it cannot accept the name of the other for credit line reasons, either because it has no line for the second institution or its line is full. The broker should explain to the second institution why the transaction has not been consummated and identify the other institution involved. Two considerations support this conclusion. First, most managers consider this information to be helpful since it clarifies the market standing of their institution. Second, market participants recognize that credit lines are a necessary prudential constraint on market participants; their invocation in appropriate circumstances does not necessarily reflect poorly on either institution.

When a "name" problem arises, each institution knows the details of the trade that, but for the problem, would have been consummated. Because such information is considered privileged in this market, many institutions believe that, once they have shown their hand in this way, they should complete a trade with the same specifications. Brokers may respond to this desire by trying to find a new counterparty (a clearing bank) to interpose between the two original ones. As long as the clearing bank is in full knowledge of the trade and is operating in accordance with its normal procedures and limits, it has no different risk serving as a clearing bank than it has with any other trade with that bank. But the clearing bank has tied up a portion of its credit lines with the other two parties. Moreover, the two transactions entail normal processing costs but do not generate revenues, since both sides of the trade are executed at the exchange rate agreed to by the original two counterparties.

Given the risks involved and the disruptions that can occur when transactions cannot be completed expeditiously, foreign exchange managers should clearly define with their brokers the approach their institution will generally follow in handling specific name problems. Some provide their brokers with the names of institutions with which they are willing to deal or, alternatively, the names of institutions they will virtually always reject. With the help of this information brokers can reduce the frequency of name problems by not matching pre-specified pairs of institutions.

Managers of foreign exchange trading operations should also assess the extent to which and the ways in which their institutions are used as clearing banks. Some banks decline to accept the name of a clearing bank and others decline to act as a clearer in such transactions.

Regardless of whether a transaction is left incomplete because of credit line or other reasons, a banking institution is left with two options in the first instance: it can either cancel its bid or offer price with the broker or request that the broker find a clearing or substitute bank. If it opts for the latter, it should allow the broker a reasonable period of time in which to find a new counterparty whose name is acceptable. In any case, a substitute should be found in no more than a few minutes and preferably within the same phone call. If an acceptable name cannot be provided in a reasonable time period, the institution should consider canceling its price.

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 the effectiveness of personal interaction. In these circumstances traders are quite likely to favor a few brokers over others and a certain amount of concentration of business 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 use his volume of business as leverage to make unreasonable demands upon a broker. 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.

In the interest of preserving confidentiality of transactions, visits by traders to brokers' offices during the trading day should normally be prearranged. During such visits traders should never participate in the interbank market through utilizing the on-premises communications network.

Brokers should take full responsibility for confirming all international transactions to the institutions they service 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 the same day the trade is consummated. Banks, of course, have the responsibility to check the confirmation brokers provide on a timely basis.

Trader-Customer Relationship

Growing strain has emerged in the relationship between bank dealers and their customers. The strain reflects increased size and sophistication of customers' requirements, the pressures of a more competitive marketplace, and increased volatility of exchange rates. Customers are increasingly requesting narrow spreads to cover an ever growing size of transactions. At the same time customers do not typically extend reciprocity; that is, they do not make markets to bank dealers nor do they provide rate quotations with

narrow spreads to cover bank dealers' own needs. This situation can be frustrating for dealers who must cope with internal pressure to make profits. These circumstances require a high degree of integrity and respect in relationships between dealers and customers. These circumstances also require clear communication between management on the one hand and traders and sales personnel on the other hand about the business objectives of the trading operation.

It is normal practice for non-financial organizations to delegate trading authority formally to specific persons within the organization and to advise their bankers accordingly. Although one cannot identify with certainty the authorized individual via telephone, banks are obliged to make reasonable efforts to comply with corporate dealing authorization instructions. Bank personnel who deal with customers should be familiar with current corporate instructions and those instructions should be readily accessible. Additionally, sales and trading personnel should bring to management attention changes in counterparties' trading patterns or the accumulation of significant book profits or losses.

Operational Aspects of Trading

Trading of foreign exchange and other money market instruments exposes an institution to various forms of market risk and various forms of credit risk. Management of a trading institution should clearly identify the types and scale of risk it is willing to have the trading operation assume, as well as have in place effective procedures for monitoring its individual risk exposures and for detecting lack of compliance with management's policy directives. Both the ways of expressing risk exposures and the procedures for monitoring them differ considerably from one institution to another The differences depend among other things on the structure of the organization, volume of activity, flexibility desired, costs associated with individual controls and differences in law and practice between trading markets. But it is essential that each institution's system of control be commensurate with the risks to which it is exposed

Even with such systems in place, trading errors will occur. Errors in foreign exchange are becoming increasingly costly and burdensome to resolve. This trend reflects the growing size of individual deals and daily volume as well as exchange rate volatility and the high level of turnover of personnel. At the same time, the potential for errors has increased as different institutions adapt to changing technology and are at different stages of implementing these changes. Management should be attentive to the need to maintain clear lines of communication and authority internally, have adequate support for its dealing operations, and have in place procedures to facilitate timely recognition and resolution of problems that do arise.

Deal Confirmations. Increasingly, institutions active in the exchange markets are choosing to exchange confirmations of all deals of significant amounts — spot and forward, interbank and corporate — by telephone, telex, SWIFT, or other means of immediate communication on the transaction date. Same-day telephone confirmation is then followed up with written confirmation. Trading institutions have found that the sooner a problem is identified, the easier and maybe less expensive it is to resolve. Prompt and efficient confirmation procedures also are a deterrent to unauthorized dealing.

Taping of Telephone Conversations. Another practice many active trading institutions have adopted is to tape record all telephone lines used for trading and confirmation. The taping of conversations in foreign exchange trading rooms and confirmation areas helps resolve disputes quickly and fairly. Whether or not dealers need access to untaped lines in order to carry out unrecorded conversations on sensitive topics is a matter of individual preference.

Access to tapes containing conversations should be strictly limited to those personnel with supervisory responsibility for trading, customer dealing, or confirmations. They should be kept in secure storage for as long as is sufficient for most disputes to surface. Wherever taping equipment is first installed, banks should give counterparties due notice that, henceforth, conversations will be taped.

Third Party Payments. Management should have a clear policy for dealers concerning the appropriateness of honoring requests for "third party payments." A "third party payment" involves a transfer of funds to an account, institution or corporation other than the counterparty to the deal. A subsidiary of the counterparty is a legally separate third party but a foreign branch of an institution is not.

The normal payment risk inherent in foreign exchange — the risk that funds are paid out to a counterparty but not received — is most acute in deals where the funds, either local or foreign currency, are transferred to a party other than the principal to the transaction. These "third party payments" are more susceptible than normal transactions to fraud perpetrated by a current or former employee of the counterparty who is diverting payment to a personal account, fraud perpetrated by an employee of the bank who is altering the payment instructions, or misinterpretation of the payment instructions whereby the funds are transferred to an erroneous beneficiary. In many cases the bank's ability to recover the funds paid out will depend upon the outcome of legal proceedings.

As a matter of policy, many institutions establish special controls for this type of transaction. The control procedures

appropriate to address the associated risks would include various measures to authenticate or verify "third party payments" such as:

- to require the counterparty to provide standing payment and settlement instructions;
- to require an authenticated confirmation on the transaction date;
- to require the counterparty to submit a listing of individuals authorized to transact business and to confirm deals; or
- to confirm by telephone all deals on the transaction date to the individual identified by the counterparty.

Importance of Support Staff. Management's attention to a foreign exchange trading operation is usually directed toward establishing trading policies, managing risk and developing trading personnel. Equally important 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, the underlying results properly evaluated and accounts quickly reconciled. Time-consuming and costly reconciliation of disputed or improperly executed transactions mar the efficiency of the market, hurt profitability and can impair the willingness of others to trade with the offending institution.

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, management should ensure that trading is commensurate with available back office support.

Computer and Technical Support In recent years, the development of new, complex products and services has led banks to introduce products whose characteristics and risks are significantly different from those traditionally offered. As new activities are being considered, management should recognize the need not only for the special requirements new products or services may require but also for accounting, legal control and additional back office support. Management should also consider the desirability of enhancing dealer support by providing computer assistance to allow accurate and timely pricing of these new products together with the correct measurement of their associated risks, hedging requirements and profitability.

Management should also investigate thoroughly the methodology traders use to price these new products and to make other supporting calculations. It should assure itself that the procedures used are consistent with both management objectives and current market practices.

Twenty-Four Hour Trading. With foreign exchange trading now taking place on a continuous 24-hour basis, management should be certain that there are adequate control procedures in place for trading that is conducted outside of normal business hours — either at the office or at traders' homes. Management should clearly identify those types of transactions that may be entered into after the normal close of business and should ensure adequate support and accounting control for such transactions. Management should also designate and inform their counterparties of those individuals, if any, who are authorized to deal outside the office. In any case, all confirmations for trades arranged off-premises should be sent promptly to the appropriate staff at the office site.

Increasingly, banks in the United States are receiving, during their workday, requests to trade from dealers operating outside of the counterparty's normal business hours. Management should consider how it wants its own dealers to respond. It is possible that, for selected counterparties, arrangements can be discussed in advance and a *modus operandi* can be established that will accommodate the counterparty's needs and still identify and protect all parties to the transaction.

Stop Loss/Profit Orders. Dealing institutions may receive requests from branches, customers and correspondents to buy or sell a currency if the exchange rate for that currency should reach a specified level. These orders, which include stop/loss and limit orders from trading counterparties that desire around-the-clock protection for their own currency positions, may be intended for execution during the day, overnight, or until executed or canceled.

Management should be sure there is an explicit and mutually-acceptable understanding between the institution and its counterparty about the obligation the institution has assumed in accepting such an order. Moreover, management needs to establish clear policies and procedures for its traders who accept and execute stop/loss and limit orders These orders create a potential for loss or liability which can be substantial if the order is mishandled within the organization or there is a misunderstanding about some of the terms and conditions concerning the execution and confirmation of the deal.

Management should also insist that any dealer accepting such an instruction have adequate lines of communication with the correspondent so that the dealer can reach authorized personnel in case of an unusual situation or extreme rate movement. This procedure can minimize the possibility that misunderstandings will arise about the circumstances under which these orders should be executed.

DOCUMENT OF ORGANIZATION

CONCLUSION OF FEASIBILITY STUDY TO ESTABLISH FOREIGN EXCHANGE COMMITTEE

(June 1978, as amended October and December 1987 and December 1989.)

It was generally agreed that any new forum for discussing matters of mutual concern in the foreign exchange market (and where appropriate off-shore deposit markets) should be organized as an independent body under the 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 insure 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 and related international financial markets.

To serve as a channel of communication between these markets and the Federal Reserve and, where appropriate, to other official institutions within the United States and abroad.

To enhance knowledge and understanding of the foreign exchange and related international financial markets, in practice and theory.

To foster improvements in the quality of risk management in these markets.

To develop recommendations and prepare issue papers on specific market-related topics for circulation to market participants and their management.

It is understood that the Committee would seek to work closely with the Forex and other formally established organizations representing the other relevant financial markets.

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 16 members and at least an equal number of alternates. In addition, the president of Forex 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, an alternate would succeed to full membership.

The composition of the Committee should be as follows:

5-6 East Coast Banks

2-3 Other U.S. Banks

2-4 Foreign Banks

1 Investment Bank

1-2 Brokers (preferably to represent both foreign exchange and Euro-deposit markets)

the president of the Forex USA, Inc.

the Federal Reserve Bank of New York

Committee Procedures

There would be a meeting of the Committee with a specified agenda of items at least every alternate month. The format of the discussion, however, would be informal.

In the event that a member is unable to attend a meeting, an alternate for that member 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 will have a standing Membership Subcommittee to aid in the selection and orientation of new members A representative of the Federal Reserve Bank of New York will serve as chairman of this Subcommittee.

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 either at the Federal Reserve Bank of New York or at other member institutions.

In addition to the meetings provided for above, a meeting of the Committee may be requested at any time by two or more members.

Responsibilities of Committee Members

The Foreign Exchange Committee membership is composed of institutions who participate actively in the foreign exchange markets as well as other financial markets worldwide. As a senior officer of such an institution, the Committee member has acquired expertise that is invaluable to attaining the Committee's objectives. The member's continuous communication with the markets worldwide generates knowledge which is necessary to the Committee's deliberations of market issues or problems. Effective individual participation is critical if the collective effort is to be successful.

The responsibilities of membership apply equally to all associated with the Committee, whether they are serving currently as a formal member or an alternative member.

The specific responsibilities of each member are:

- To function as a communicator to the Committee and to the marketplace on matters of mutual interest, bringing issues and information to the Committee, contributing to discussion and research, and sounding out colleagues on issues of concern to the Committee.
- To represent to the Committee the concerns of his own institution. In addition, to reflect the concerns of a market professional as well as the constituency from which his institution is drawn or the professional organization on which he serves.
- To participate in Committee work and to volunteer the resources of his institution to support the Committee's projects and general needs.
- To coordinate between the formal member and the alternate attendance at meetings and to communicate to the absent member on a timely basis the discussions and other items of import that occurred at each meeting. This responsibility is reciprocal within each designated set of formal and alternate members.

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FOREIGN EXCHANGE COMMITTEE MEMBERS AND ALTERNATES

(JANUARY 1990)

I. EAST COAST BANKS

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II. OTHER U.S. BANKS

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