Guidelines for Foreign Exchange Trading Activities

May 2008

Introduction

The development and dissemination of useful trading practice guidelines are key priorities of the Foreign Exchange Committee. With the distribution of these new *Guidelines*, the Committee seeks to:

- provide all participants in the wholesale foreign exchange community (individuals and firms, intermediaries, and end users) with a common set of best practices that will assist them in conducting their business activities,
- promote discussions about practices that further market efficiencies and transparencies,
- highlight pertinent issues meant to facilitate informed decision making, and
- refer the global community to useful research materials and related initiatives of the Foreign Exchange Committee.[1]

The Committee published its first version of the *Guidelines* in 1979. As the industry evolved and trading processes changed, the Committee periodically updated the paper. This latest version, the Committee's sixth, revises a 2004 document and supersedes previous versions.

Rapid Technological Change = Uncertainty

The explosive growth of electronic communication and electronic commerce has driven the foreign exchange industry headlong into reassessment. Best practices that appeared appropriate a few years ago are now being rethought and reshaped to better fit the electronic age.

In this new environment, access to market making seems easier, and more organizations are considering initiating activities in the foreign exchange market. Moreover, although automation has streamlined many transactions and procedures, the foreign exchange market may be becoming more, rather than less, complex. Given these changes, firms are encouraged to put in place mechanisms for a continued reassessment of their procedures.

The guidelines presented in this document merit serious consideration by those who are currently involved in, or seeking to be involved in, the foreign exchange market. Compliance with these guidelines should give both firms and individuals confidence that they are pursuing sound business practices.

Trading

The smooth functioning and integrity of the market are facilitated by the trust, honesty, and good faith of all participants, including direct dealers and electronic or voice brokers.[2] This high standard of behavior should extend to all transactions, including those made through electronic communication.

Suggestions for Special Trading Practices and Procedures

OFF-MARKET RATES/HISTORICAL RATE ROLLOVERS

As a general rule, all transactions are executed at current market rates. At times, however, commercial considerations may dictate otherwise. In that event, the Committee recommends explicit controls and specific procedures. Details of these procedures are provided in a letter published by the Foreign Exchange Committee.[3]

As noted in the document, deviation from prevailing market rates involves accounting, credit, and propriety risks.

Accommodation of customer requests for off-market transactions (OMTs) or historical rate rollovers (HRROs) should be selective, restricted, and well documented, and should not be allowed if the sole intent is to hide a loss or extend a profit or loss position. Counterparties should also show that a requested HRRO is matched by a real commercial flow.

Finally, no contract for OMTs/HRROs should extend for more than six months from the original settlement date or over a fiscal year-end unless justified by an exceptional circumstance such as a delayed shipment.

STOP-LOSS/PROFIT ORDER-PATH-DEPENDENT TRANSACTIONS

Trading institutions' stop-loss orders involve the purchase or sale of a fixed amount of currency when and if the exchange rate for that currency reaches a specified level. These orders may be intended for execution during the day, overnight, or until finalized or canceled.

Fluctuations in market liquidity, multiple price-discovery mechanisms, and evolving channels of distribution often obscure transparency and may complicate the execution of such business. To avoid disputes, institutions and their counterparties should share a clear understanding of the basis on which these orders will be undertaken.[4] In particular, the price mechanism that will trigger the execution of any transaction should be clear.

An institution that engages in stop-loss transactions assumes an obligation to make every reasonable effort to execute the order quickly at the established price. Management should also make certain that their dealers and operations departments are equipped to attend to all aspects of the frequently complex nature of these orders during periods of peak volume and extreme volatility. These complexities may include conditional provisions, transaction notification, and cancellation or forwarding instructions.

STOP LOSS ORDER DEFINITIONS

Stop loss orders typically fall into four classes, although some dealers may offer products that vary in their structure and complexity. Some classes are more commonly used than others and dealers do not typically offer all classifications of stop loss orders.

To varying degrees, each type of stop loss order balances the protection against the risk of "slippage" (the difference between the order level and the actual trade price) and the expense of an early exit from the trade position. While slippage is a function of liquidity at different price levels, it may be magnified or mitigated depending on the type of stop loss order used. All of these definitions apply to normal market amounts under normal market conditions. As always, a counterparty should ensure that it independently understands the parameters of normal market conditions that prevail for each currency market and can effectively recognize risks during abnormal market conditions.

Bid/Offer stop

The order is executed when the market bid (offer) price reaches the level indicated by the bid (offer) stop order. This stop loss order becomes an "at best" order (executed at the best price available), which may result in significant slippage in volatile market conditions.

Example: Buy 10 mio Eur at .90xx s/1 BID - When the Euro bid price is at .90xx, the customer's order will be filled at the next offer price. In this example, the order may be filled at a much higher price than the original order level, depending on the market liquidity at the time of the trade.

All taken/given next stop

The order is executed when the market is no longer offered (in the case of a buy stop) or bid (in the case of a sell stop) at the level indicated by the order. While this stop loss order becomes an "at best" order, the slippage may be less than a bid/offer stop under normal liquidity conditions.

Example: Buy 10 mio Eur at .90xx s/1 All Taken Next – When the Euro trades through all remaining .90xx offers, the customer's order will be filled at the next available offer. It is not necessary for the market to be bid at .90xx.

One touch stop

The order is executed if the order level trades in the market. It is only necessary for the level to trade once for the stop loss to be executed. This type of stop loss order may provide additional protection against slippage. However, it typically does not protect against the risk that the order may be executed even if the market price does not trade through the order level.

Example: Buy 10 mio Eur at .90xx s/1 One Touch - If the Euro trades at .90xx, the customer's order will be filled at the next offer, including any remaining .90xx offers. In this example, the order fill may be closer to the order level than a bid/offer stop or an all taken/given stop order.

At price stop

The order is typically a "one touch" stop where the dealer will guarantee, under normal market conditions, that the order fill will not exceed the level of the order. The customer typically faces the risk that the order may be executed even if the market price does not trade through the order level. It should be noted, however, that "at price stops" are not typically offered by all dealers given their implied guarantee.

Example: Buy 10 mio Eur at .90xx s/1 At Price - If the Euro trades at .90xx, the dealer will buy 10mio Euro. The dealer will sell 10 million euros to the client at .90xx regardless of where the dealer covers the position in the market. In this case the risk of slippage is born by the executing dealer given that the trade price may exceed the order level.

NAME SUBSTITUTION OR SWITCHES

In the traditional foreign exchange market, the names of the institutions placing bids or offers with a broker are not revealed until a transaction's size and exchange rate are agreed on.[5] Even then, only the counterparties receive this information. If one of the counterparties is unacceptable to the other, the substitution of a new counterparty may be agreed on. The procedures for such substitutions include the following:

- both counterparties receive the name of an acceptable counterparty within a reasonable amount of time,
- the clearing bank is fully aware of the parties in the trade and the appropriate credit lines, and
- the clearing bank is operating in accordance with its normal procedures and limits.

An institution can minimize name substitution requests by providing a broker with the names of institutions it is willing to deal with or, alternatively, the names of the institutions it will always reject. A broker that proposes a transaction on behalf of an institution not usually regarded as an acceptable counterparty could also make the potential counterparty aware that the transaction may need to be referred to management for credit approval (that is, the counterparty may be "refer-able").

Name substitutions rarely occur in the brokered forward market. Participants in this market generally recognize and understand that a broker's forward bids and offers, even though firm, cannot result in an agreed upon trade at matching prices unless it comes within the internal credit limits of each counterparty. Forward dealers should not falsely claim a lack of credit to avoid trades or to manipulate prices. The allocation of counterparty credit lines to automated trading systems should be sufficient to support an institution's normal trading. Manipulation of credit lines to influence prices or transactions on such systems is unethical.

DEALING WITH UNNAMED COUNTERPARTIES

Trading foreign exchange on an unnamed basis refers to the practice whereby an investment manager trades on behalf of a client without revealing its identity to the dealer in order to maintain client anonymity.[6] Such practices constrain a dealer's ability to assess the creditworthiness of their counterparties and comply with "know your customer" and anti-money-laundering rules and regulations. These conditions expose dealers to clear and significant legal, compliance, credit, and reputational risks, as well as heighten the risk of fraud. In addition, such practices pose a risk to the broader financial sector given the increased risk of fraud.

It is recommended that investment advisors and dealers alike implement measures to eliminate the practice of trading on an unnamed basis.[7] Specifically, investment advisors and foreign exchange intermediaries should develop a process to disclose client names to a dealer's credit, legal, and compliance functions prior to the execution of foreign exchange trades. In situations where identifier systems are used to shield client identity, dealers should establish procedures to ensure the strict confidentiality of the intermediary's clients and restrict the disclosure of this information to the front office except in the event of default. This could include a confidentiality agreement whereby the dealer agrees that only its credit, legal, and compliance functions will have access to the client name. The use of identification codes, or similar identifier systems, has been achieved in other markets.

Prime Brokerage

In a prime brokerage transaction, an institution acting as prime broker agrees to intermediate specified eligible transactions between a client and any one or more approved executing dealers. The transaction is "given up" to the prime broker, with the result being one transaction between the dealer and the prime broker and an offsetting transaction between the prime broker and the designated party or funds or accounts for which that party executes foreign exchange trades. As prime brokerage tends to concentrate risks and responsibilities for risk management, it is critical that parties to prime brokerage transactions manage those risks effectively. The Committee recommends specific practices that may mitigate some of the credit, operational, and reputational risks associated with prime brokerage.[8]

Electronic Trading

ELECTRONIC TRADING WITH BROKERS

The use of electronic interfaces among the dealer/brokering community is encouraged as it reduces trading- and operations-related errors.[9] To maximize the effectiveness of electronic brokering, the following best practices are suggested:

- Participants should ensure that the rules of electronic trading systems are consistent with current market convention or that any variation from market convention is clearly understood. In any event, participants should ensure that the rules of the trading system are very clear.
- Users of electronic trading systems need to act according to established market conventions and the rules of the system. If there is any departure from convention, all parties need to indicate their acceptance at the time a deal is transacted.
- Management must actively monitor the use of systems to ensure that staff is properly trained, disputes are identified promptly, and proper interaction exists with vendors.
- Procedures involving trade disputes should be documented and fully understood by all parties before any trades are executed.
- Participants should fully integrate electronic trading systems with their own internal processing systems to avoid exceeding credit and other risk limits.
- Firms should be fully aware of their system capabilities, including obligations of all offered services and potential liability if they fail to satisfy their obligations.

ELECTRONIC TRADING WITH CUSTOMERS

The introduction of Electronic Communication Networks (ECNs) and Automated Trading Systems (ATSs)—extending cyber communication from dealers and brokers to dealers and their customers—will present new challenges to the entire industry.

Because trading activity will increasingly be centered on remote electronic workstations, trading parties may need to take special precautions concerning passwords and system access. Such measures would include:

- working with one's counterparties to ensure that individual passwords are utilized,
- recognizing the importance of guarding individual passwords, and
- guarding the software and hardware of one's own workstation. Trading parties will need to have up-to-date virus protection and must use caution in downloading and accessing external information.

Twenty-Four-Hour Trading and Off-Site Trading

With foreign exchange trading taking place on a continuous twenty-four-hour basis, management should be certain that adequate control procedures are in place for trading that is conducted outside of normal business hours either at the office or elsewhere.

Management should clearly identify the types of transactions that may be entered into after the normal close of business and should ensure that there are adequate support and accounting controls for such transactions. Management should also identify those individuals, if any, who are authorized to deal outside the office and should make their names known to counterparties. In all cases, confirmations for trades arranged off premises should be sent promptly to the appropriate staff at the office site.

Twenty-four-hour trading, if not properly controlled, can blur the distinction between end-of-day and intra-day position risk limits. Financial institutions involved in twenty-four-hour trading should establish an unofficial "close of business" for each trading day against which end-of-day positions are monitored.

Institutions increasingly receive requests to trade from overseas traders who are operating outside their own normal business hours. Management should consider how they want their traders to respond.

Trading staff should be cautious about entering into a transaction with a counterparty outside of the counterparty's normal dealing hours. Arrangements should be specified and procedures agreed upon in advance to accommodate the counterparty's need and to ensure that the counterparty's traders are acting within the scope of their authority.

Mistrades/Disputes[10]

MISTRADES

Difficulties may arise when a trader discovers that a broker did not complete a transaction. Failure to complete a transaction as originally proposed may occur for a variety of reasons:

- the price was simultaneously canceled,
- an insufficient amount was presented to cover dealers' desired transactions, or
- an unacceptable counterparty name was presented.

DISPUTES

Disputes may arise over misunderstandings or errors by either a trader or a broker. Whenever a trade is aborted, managers and traders must recognize that it may be impossible for the broker to find another counterparty at the original price. Managers should ensure that their staffs understand that it is inappropriate to force a broker to accept a transaction in which a counterparty has withdrawn its interest before the trade could be consummated—a practice known as "stuffing."

RESOLUTION

Disputes, however, are inevitable, and management should establish clear policies and procedures for resolution at the senior management level with a transparent audit trail. For example, in many markets difference checks are exchanged. Informal dispute resolution practices that sometimes develop in the market can be inconsistent with sound business practices. For example, the use of points is not an appropriate means of trade dispute resolution, and for some counterparties in some jurisdictions the use of points may be contrary to regulatory or supervisory guidance.[11]

Care must be taken that informal dispute resolutions are achieved through good-faith, arm's-length negotiation. Differences should routinely be referred to senior management for resolution, a process that effectively shifts the dispute from the trading level to the institution. In addition, maintaining records of trades conducted through automated dealing systems or executed over the telephone can aid in resolving disputed transactions.

Traders should not renege on a transaction, claiming credit line constraints, in an effort to "settle" a personal dispute. Instead, senior management should be made aware of a problem so that both counterparties may act to address and solve the issues. In all cases and at all times, traders should maintain professionalism, confidentiality, and proper language in telephone and electronic conversations with traders at other institutions.

RECIPROCITY

Two institutions may agree to provide timely, competitive rate quotations for marketable amounts on a reciprocal basis. However, because of changes in channels of distribution, the possibility of multiple prices in fragmented ECNs, and unpredictable oscillations in market liquidity, bilateral arrangements should be regularly revisited by trading room management.

Management should analyze trading activity periodically. Any unusually large concentration of direct trading with an institution or intermediary should be reviewed to determine whether the level of activity is appropriate.

UNINTENTIONAL TRADES

In an electronic brokering environment, unintentional trades may take place. Management of all trading parties should take steps to reduce the likelihood of unintentional trades. This can be accomplished when management assumes a key role in training new employees to deal with a voice broker or an electronic system.

Sales

Know Your Customer

The concept know your customer is essential to the basic operation of any financial institution. By fully comprehending and complying with their institution's know-your-customer guidelines, staff protect their institution from liability, including legal, criminal, and reputation risk.

Management should ensure that sales staff have sufficient knowledge of their customers and of the types of transactions they are likely to perform, regardless of whether they are dealing by voice, electronically, or through an intermediary. Specifically:

- Customer information should be reviewed periodically and updated as necessary.
- Significant book profits or losses, unusual requests, and transactions or patterns of activity inconsistent with a customer's profile should be referred to management or to the legal or compliance department.
- Suspicious activities should be investigated.
- Salespeople should not assist any customer in structuring financial transactions that would hamper proper disclosure to governmental or law enforcement authorities under applicable law.
- Trading management should develop policies to protect the institution's premises and systems from being used as a vehicle for money-laundering activities. Sales staff should be made aware of "high-risk" geographies and industries for money laundering.
- Management should be aware of and disseminate information on new suspicious activities in the market.

Relating to Customers

Confidentiality and customer anonymity are essential to the operation of a professional foreign exchange market. Market participants and their customers expect that their interests and activity will be known only by the other party to the transaction (including accountants, lawyers, and other advisors on a need-to-know basis) and an intermediary, if one is used.[12]

It is inappropriate to disclose, or to request others to disclose, proprietary information relating to a customer's involvement in a transaction except to the extent required by law or upon the request of the appropriate regulatory body. Any exceptional request should be referred to management for review.

Sales professionals need to assure themselves of a customer's authority to act (capacity), the authority of third parties (intermediaries) to act for the customer, and the authority of individuals to act for the customer or third party.

Providing Proper Disclosures to Ensure Good Client Relationships

It is acceptable for a salesperson to convey economic or market information, trading parameters, the institution's views, and personal views. It is not prudent for a salesperson to provide investment advice in the context of a dealing relationship unless this service is specifically contracted for or stipulated in writing. Sales staff should communicate effectively with clients to ensure that the clients have a full understanding of their trades. For complicated or structured transactions, the principal risks should be clearly identified for the client. It may be advisable to have such transactions set forth in writing and a summary prepared of the transactions' principal risks, possible outcomes, and related cash flow information. Any such documents should include necessary disclaimers.

Making Sure All Instruments Are Valued Fairly

From time to time, institutions receive customers' requests for portfolio valuations or pricing on specific outstanding financial contracts. It is important that any reported valuations not differ from what is posted on the institution's own books.[13] It is the responsibility of a salesperson to determine whether the customer is requesting pricing for dealing purposes or for valuation purposes.[14] At the same time, it is advisable to make appropriate disclosures when providing any information on pricing. Finally, it is recommended that any valuation be provided only after consultation with both senior management and the institution's legal department.

Product Development

New product development needs to be supported by approval and implementation procedures, including signoffs by legal, tax, audit, systems, operations, risk management, and accounting departments.

Disputes

Management should establish clear policies and procedures for resolution of disputes between salespeople and clients at the senior management level through the use of a transparent audit trail. Sales managers should monitor such disputes, and care must be taken to ensure that informal dispute resolutions are achieved through good faith and arm's-length negotiation. Differences should routinely be referred to senior management for resolution. Furthermore, commercial practices and products should be defined, taking into account the protection of client as well as firm interests.

Operations

Best Practices for Operations

Failure to adequately manage any type of operational risk—whether it is sophisticated or elementary—can have the same impact: it can alter an institution's profit or loss, cause an incorrect reading of the institution's trading positions, and raise credit risk for the institution and its counterparty. The Foreign Exchange Committee has published three papers that are essential reading on this topic—two that offer best practices for operations management[15] and a third specifying operational procedures for collateralized transactions.[16]

These papers recommend specific measures, including ensuring a separation of duties between operations and trading, confirming trades in a timely manner, and understanding the extent to which counterparties are responsible for electronic problems and disruptions.

Procedures

Guidelines applying to the work of the support staff include the following:

- details of each trading transaction should be accurately recorded,
- payment instructions should be correctly exchanged and executed,
- timely information should be provided to management and traders,
- underlying results of transactions should be properly evaluated and accounts quickly reconciled, and
- open issues and discrepancies should be resolved in a timely manner.

Time-consuming and costly reconciliation of disputed or improperly executed transactions mars the efficiency of the market, hurts profitability, and can impair the willingness of others to trade with the offending institution.

Management must be aware of its responsibility to create an operating staff adequate to support the scope of the trading desk's activity in the market. In addition, management should ensure that trading is commensurate with available back-office support.

It is also essential that management and staff of the back office be sufficiently independent from the traders and trading management in terms of organizational reporting lines. Finally, the incentive and compensation plans for back-office personnel should not be directly related to the financial performance of the trading units.

Customer Block Trades

Investment advisors frequently bundle trades together for several clients (particularly in the case of mutual funds), later advising the institution with whom they are trading of the allocation among various clients (or funds). It is suggested that such allocations be done on a timely basis. It is also recommended that management adopt policies requiring that all transactions be allocated within some minimum period of time (for example, by the end of the business day). The credit department should be involved in any exceptions to this policy.[17]

Deal Confirmations

It is prudent for institutions to have confirmations as evidence of their foreign exchange transactions. A broad array of methods exists for confirming transactions including, but not limited to, telephone, written, and electronic means. Each institution should select the confirmation method most appropriate to it as well as manage the associated risks. The use of Master Confirmation Agreements or bilateral agreements with counterparties may assist firms in establishing legal comfort over agreement on trade terms.

Trades with clients, counterparties, or intermediaries, whether spot, forward, or derivative transactions, should be confirmed as soon as possible after the terms of the trade are agreed. Prompt and efficient confirmation procedures are a deterrent to unauthorized dealing. In addition, the sooner a trade problem is identified, the easier and often less expensive it is to resolve. It is recommended that institutions establish escalation procedures to resolve unconfirmed transactions.[18]

Netting[19]

There are three primary forms of netting: close-out; novation; and payment, or settlement, netting. Close-out occurs following some predefined event such as a default and is intended to reduce exposures on open contracts if one party meets certain conditions specified by the contract before the settlement date. Netting by novation agreements provide for individual forward-value contractual commitments to be discharged at the time of their confirmation and replaced by new obligations forming part of a single agreement. Payment, or settlement, netting involves settling payments due on the same date and in the same currency on a net basis.

It is in the dealer's best interest to institute netting only through the use of legally enforceable documents.[20] Dealers may also want to provide for closeout netting in their netting agreements to reduce additional market risk in the event of default.

More detail on payment and close-out netting is available in *Managing Operational Risk in Collateralized Foreign Exchange*.

Transaction Cancellations and Amendments

Proper control should be maintained over the processing of amendments and cancellations. Duties associated with the initiation of amendments and cancellations should be clearly segregated from those associated with the processing of amendments and cancellations. Exception reporting on amendments and cancellations is another important control mechanism.[21]

Third-Party Payments

Third-party payments—the transfer of funds in settlement of a foreign exchange transaction to the account of an institution or corporation other than that of the counterparty to the transaction—raise important issues that need to be closely considered by any organization. The risk involved in ensuring payment to a third, unrelated party can be significant.

Before customers are accommodated with third-party payments, management should have clear policies and procedures concerning the appropriateness of honoring these requests.

Third-party payments are historically more likely to be subject to question than routine trades. The trade could mask fraud by a current or former employee of the counterparty who is diverting payment to a personal account. A misinterpretation of the payment instructions could also occur; in that event, funds transferred to an erroneous beneficiary may be difficult to recover. In many cases, the ability to recover the funds will depend upon the outcome of legal proceedings or regulation.

Many institutions establish special controls for this type of transaction as a matter of policy. The controls include various measures to verify third-party payments. An institution's compliance department can play an important role in monitoring and ensuring that procedures associated with third-party payments are followed.

Control Functions

Market evolution, increased product sophistication, and technological advances have combined to make financial crimes more complex. The legal, regulatory, and reputation-related risks encountered by individuals and institutions active in financial markets have grown, and infractions are more difficult to detect. Awareness, training, and enhanced due diligence are management responsibilities that can help mitigate such risks.

Best Practices for Risk Management

Specific divisions or functions within a financial institution can implement a number of practices to limit and control risk. Some examples of specific best practices follow:

In accounting

Adherence to company-approved accounting policies and standards for all products; periodic independent reviews by internal auditors; daily oversight by an independent risk management unit; annual review by external auditors; annual or more frequent examinations by the regulators.

In trading

Segregation of trading room and back-office functions for deal processing, accounting, and settlement; independent verification of revaluation rates and yield curves used for risk management and accounting purposes; independent daily reporting of risk positions and trader profit/loss to senior management; well-documented and appropriately approved operating procedures.

In personnel

Provision of sufficient human resources and systems support to ensure that deal processing and risk reporting remain timely and accurately documented and supported.

Audit and Audit Trails

A firm's risk management controls should be subject to routine reviews by the firm's internal auditors. Such reviews serve as external evaluations of compliance with a firm's internal controls.

Management should ensure that procedures are in place to provide a clear and fully documented audit trail of all foreign exchange transactions and should make every effort to automate the process fully. The audit trail should provide information about the counterparty, currencies, amount, price, trade date, and value of each transaction.

Such information should be captured in the institution's records as soon as possible after the trade is completed and should be in a format that can be readily reviewed by the institution's management and by internal and external auditors. Documentation procedures should be adequate to inform management of trading activities and to facilitate detection of any lack of compliance with policy directives.

Technological innovations in trading and execution systems have enhanced data capture and allowed for the creation of more precise audit records. Most electronic dealing systems independently generate trade data that serve as an effective audit trail. Trades executed through automated dealing systems provide better verification than trades executed over the telephone.

An accurate audit trail significantly improves accountability and documentation and reduces instances of questionable transactions that remain undetected or improperly recorded. Management may therefore wish to take into consideration its audit trail procedures when considering trading room configuration and mechanics for dealing with counterparties.

Legal and Compliance

The legal and compliance departments support trading practices and procedures by identifying laws and regulations that apply to the foreign exchange business. Trading departments should familiarize themselves with the legal and compliance functions. Management should encourage fluid interaction between these two divisions. Specifically, a compliance department may support an institution by:

- ensuring that programs conforming to applicable laws, rules, and obligations are implemented. Such support may include documenting and circulating appropriate policies and procedures and providing training to employees.
- observing operations, alerting management and trading staff to gaps in compliance, and providing leadership in addressing specific gaps and other compliance issues.

Risk Management

The goal of risk management is to ensure that an institution's trading, positioning, sales, credit extension, and operational activities do not expose the institution to excessive losses. The primary components of sound risk management include:

- a comprehensive risk measurement strategy for the entire organization,
- detailed internal policies on risk taking,
- strong information systems for managing and reporting risks, and
- a clear indication of the individuals or groups responsible for assessing and managing risk within individual departments.

Risk management methodologies vary in complexity; the rule of thumb is that the sophistication of a risk management method should be commensurate with the level of risk undertaken by the institution. The qualitative and quantitative assumptions implicit in an institution's risk management system should be revisited periodically. While systems and reports are elements of risk control, effective communication and awareness are just as vital in a risk management program.

Other important elements of a risk management program include: an independent valuation-model testing and approval process; independent approval and monitoring of customer credit limits and market risk position limits; exception reporting and independent approval of limit excesses; and use of credit-related industry agreements, such as the Cross-Product Master Agreement. Variations from expected revenue plans should also be evaluated periodically within the context of risk limits that the institution has in place.

TYPES OF RISK WITH FOREIGN EXCHANGE TRANSACTIONS

Institutions and staff should be aware of the various types of risk exposure in foreign exchange transactions:

Market risk refers to adverse changes in financial markets. It can include exchange rate risk, interest rate risk, basis risk, and correlation risk.

Credit risk occurs with counterparty default and may include delivery risk and sovereign risk.

Settlement risk[22] is specifically defined as the capital at risk from the time an institution meets its obligation under a contract (through the advance of funds or securities) until the counterparty fulfills its side of the transaction.

Liquidity risk refers to the possibility that a reduction in trading activity will leave a firm unable to liquidate, fund, or offset a position at or near the market value of the asset.

Operational/technology risk emanates from inadequate systems and controls, human error, or management failure. Such risk can involve problems of processing, product pricing, and valuation.

Legal risk relates to the legal and regulatory aspects of financial transactions or to problems involving suitability, appropriateness, and compliance.

Reputational risk relates to the current and prospective impact on earnings and capital attributable to negative public opinion of an institution's products or activities.

Systemic risk relates to the risk that the failure of one market participant to meet its required obligations will prevent other participants or financial institutions from meeting their obligations when due.

In addition to these types of risk, there are also overall business risks such as fraud. Institutions and staff should also be aware of the risks associated with the accounting and tax treatment of transactions.

Market and Credit Risk

In diversified institutions, market and credit risk can extend across departments, legal entities, and product lines, challenging both management information systems and documentation procedures. Management should develop discipline and experience in prudently managing the risk of transactions. Risks should be weighed against potential returns and long-term organizational goals.

TECHNIQUES FOR MEASURING MARKET RISK

Nominal measure
Also called notional measure. One of the basic gauges of market risk, nominal measure refers to the amount of holdings or transactions on either a gross or net basis. An institution would use this measure, for example, when trying to determine an aggregate limit on a spot currency position, or when calculating a limit on the percentage of open interest on an exchange-traded contract.

Factor sensitivity measure
Used to ascertain the sensitivity of an instrument or portfolio to a change in a primary risk factor. Examples of factor sensitivity measures are duration risk and beta risk.[23]

Optionality measure
Includes the "Greek" measures delta, vega, theta, rho, and gamma. The optionality measure estimates the sensitivity of an option's value to changes in the underlying variables in a value function (corresponding, in the first four cases, to price, volatility, time, and interest rates). Gamma measures the degree to which an options delta will change as the underlying price changes.

Represents the estimated maximum loss on an instrument or portfolio that can be expected over a given time interval and with a specified level of probability.

Stress testing
Involves the testing of positions or portfolios to determine their possible value under exceptional conditions. Any assumptions used in stress testing should be critically questioned and should mirror changes in market conditions such as variations in liquidity. Most stress testing models rely on dynamic hedging or some other method to estimate a portfolio's hypothetical response to certain market movements. In disrupted or chaotic markets, the difficulty in executing trades tends to rise and actual market risk may also be higher than measured.

Scenario simulation
Assesses the potential change in the value of instruments or portfolios under different conditions or in the presence of different risk factors.

MEASURES USED TO ESTABLISH LIMITS FOR MARKET RISK

Many institutions use combinations of the following:

- Aggregate limits may be gross (restricting the size of a long or short position) or net (recognizing the natural offset of some positions or instruments). Institutions generally employ both forms.
- Maximum allowable loss (stop loss) limits are designed to prevent an accumulation of excessive losses. They usually specify some time framework—for example, cumulative losses for a day, week, or month. If reached, a maximum allowable loss limit generally requires a management response.
- Value-at-risk limits specify loss targets for a portfolio given a particular change in the underlying environment (for example, a 100-basis-point change in interest rates) or for scenarios defined at

some specific confidence interval (for example, 99 percent of possible occurrences over a time horizon).

- Maturity gap limits are used to control losses that may result from nonparallel shifts in the yield curve and/or changes in a forward yield curve. Acceptable amounts of exposure are established for specific time frames.

- Option limits are nominal limits for each of the Greek risks (the delta, gamma, vega, theta, and rho functions).

- Liquidity limits restrict the exposure that may occur when an institution is unable to hedge, offset, or finance its position because of volatile market conditions or other adverse events.

CREDIT RISK MEASURES

Credit risk in financial markets is measured as a combination of the position's current value (also termed replacement cost) and an estimate of potential future exposure relative to the change in replacement cost over the life of the contract. More specific types of credit risk exposure are listed below:

Presettlement risk
Measured by the current carrying value (market or fair value) of the instrument or position prior to its maturity and settlement. If a counterparty defaults on a financial contract before settlement, and the contract is in the money for the nondefaulting party, the nondefaulting party has suffered a credit loss equal to the current replacement cost of the contract.[24]

Potential future exposure
Represents risk and credit exposure given future changes in market prices. In calculating potential future exposure, some institutions add on factors for tenor and volatility. Others use statistical techniques to estimate the maximum probable value of a contract over a specified time horizon or the life of the contract.

Aggregate exposure
Refers to the sum of presettlement credit risk with a single counterparty. This measure is obtained by combining all transactions, by netting (if legally enforceable bilateral netting agreements are in place), or by measuring potential credit exposure on a portfolio basis.

Global exposure
Refers to the total credit risk to a single counterparty from both capital market products and loans. Many institutions convert both on- and off-balance-sheet capital market exposures to loan-equivalent amounts.

METHODS OF ENHANCING CREDIT POSITIONS

Institutions may reduce their credit risk exposure through a variety of means:

Collateral arrangements
Arrangements in which one or both parties to a transaction agree to post collateral (usually cash or liquid securities) for the purpose of securing credit exposures that may arise from their financial transactions.

Special purpose vehicles
Specially capitalized subsidiaries or designated collateral programs organized to obtain high third-party credit ratings.

Mark-to-market cash settlement techniques
The scheduling of periodic cash payments prior to maturity that equal the net present value of the outstanding contracts.

Close-out contracts or options to terminate
Arrangements in which either counterparty, after an agreed upon interval, has the option to instruct the other party to cash-settle and terminate a transaction.

Material change triggers
Arrangements in which a counterparty has the right to change the terms of, or to terminate, a contract if a pre-specified credit event, such as a ratings downgrade, occurs.

Netting agreements
Agreements that reduce the size of counterparty exposures by requiring the counterparties to offset trades so that only a net amount in each currency is settled.

Multilateral settlement systems (such as CLS)
Collaborations that may reduce settlement risk among groups of wholesale market counterparties.

Systems Controls

INFORMATION SECURITY

As technologies continue to evolve, firms must ensure that controls remain adequate to protect data integrity and security. Firms should be aware that external user access controls should be as robust as internal user access controls.[25]

CONTINGENCY AND RECOVERY

Contingency provisions can document and help regularly test disaster recovery and backup procedures involving both systems (front-, mid-, and back-office) and off-site facilities. Contingency, recovery, and security procedures should be continually assessed.

Money-Laundering Controls

Management needs to be aware of the risks presented to an institution by money laundering. All applicable money-laundering laws, regulations, and industry guidelines must be strictly followed. Internal controls, including account openings, documentation procedures, and management information/monitoring systems, must be adequate to detect suspicious activity. Any irregular or suspicious activity needs to be communicated to management in a timely manner.

Customer actions that should be viewed with caution include the following:

- large cash deposits

- the purchase or sale of large amounts of foreign currencies with the use of cash

- using accounts to move large sums of money without an apparent business purpose
- needlessly maintaining large balances in non-interest-bearing accounts
- buying or selling securities with cash
- settling bearer securities outside of a recognized clearing system
- transacting securities with no discernible purpose
- unnecessary use of an intermediary
- unexpected repayment of a problem loan
- regular payment of large sums, including wire transfers, that cannot be explained in the context of the customer's normal business
- customers whose identity proves unusually difficult or expensive to verify
- use of an address that is not the customer's permanent business address (for example, utilization of a home address for business correspondence)
- customers who purposefully avoid needed contact with bank staff
- customers on the Office of Foreign Assets Control (OFAC) lists.

In addition, sales staff should be aware of:

- transactions of politically exposed persons (PEP)
- risky transaction types such as those involving casinos and exchange houses
- transactions involving countries with unique characteristics such as fiscal paradises and free trade zones.

Accounting and Financial Controls

Accurate information, reported in a timely manner, provides a strong basis for good decision-making. Accounting has become so complex that it tends to obscure the information process. This is particularly true for cash market instruments and their correspondent derivatives, each of which is treated differently (in the United States) for accounting purposes. Additionally, firms should be fully aware of accounting rules associated with their transactions and related assets and liabilities. Different instruments can be accrued in different ways, resulting in variations between expected economic value and real accounting numbers.

ASSET PORTFOLIO CATEGORIES

All institutions that deal in foreign exchange should seek independent professional accounting counsel. Although accounting practices vary by country, the generally accepted accounting principles (GAAP) will provide any institution with a basic general framework for proper trading activities and securities holdings.

Under accounting rules, asset portfolios of financial institutions are usually divided into the following categories, according to the function of the asset:

Investment account
Investment assets are carried on the books of a financial institution at amortized cost. The institution must have the intent and the ability to hold these securities for long-term investment purposes. The market value of the investment account is fully disclosed in the footnotes to the financial statements.

Trading account
Trading assets are marked to market, and unrealized gains and losses are recognized as income. Trading accounts are characterized by the high volume of purchases and sales.

Held-for-sale account
In this account, assets are carried at the lower of either the cost or the market value. Unrealized losses on these securities are recognized as income. This account is characterized by intermittent sales activity.

ACCOUNTING FOR DERIVATIVES

Transactions are typically booked on the trade date. Off-balance-sheet derivative instruments, however, are accounted for as follows:

- If the instrument meets certain specified hedge-accounting criteria, the gains or losses (income or expense) associated with the derivative can be deferred and realized on a basis consistent with the income and expense of the hedged instrument.
- Otherwise, gains or losses must be recognized as they occur, and off-balance-sheet derivative instruments must be marked to the market's prices. This requirement would apply to derivatives used for trading purposes.

An important accounting issue for derivative instruments involves their proper categorization. Institutions should maintain adequate documentation to support the categories they have selected. Inappropriate accounting treatment may affect both income and regulatory capital.

Regardless of its designation, a derivative is reported at fair value on a balance sheet. Under SFAS 133,[26] derivative instruments are placed in one of the following categories:

"No hedge" designation
The gains or losses from changes in the fair value of the derivative contract are included in current income.

Fair-value hedge
The gains or losses from changes in the fair value of the derivative and the item attributable to the risk being hedged are both included in current income.

Cash-flow hedge
The effective portion of gains or losses in the fair value of a derivative is included in other comprehensive income (outside of net income). The remaining gain or loss on the derivative is included in income.

ACCOUNTING FOR FOREIGN CURRENCY HEDGES

Foreign currency fair-value hedge
The gain or loss on a derivative that is hedging a foreign currency commitment or a held-for-sale security and the offsetting gain or loss on the asset are recognized as current income.

Foreign currency cash-flow hedge
The effective portion of the gain or loss on the derivative that hedges a foreign exchange transaction is reported as a component of other comprehensive income. It is reclassified into earnings in the same period or periods in which the hedged foreign exchange transaction affects earnings. The remaining gain or loss in the hedging derivative instrument is recognized as current earnings.

Hedge of net investment in a foreign operation
The gain or loss on the hedging derivative is reported in other comprehensive income as part of the cumulative translation adjustment to the extent that it is effective as a hedge.

ACCOUNTING FOR FORWARD TRANSACTIONS

Net present value accounting (NPV) is the preferred approach for marking foreign exchange forward books to market. NPV reflects the true market values of unsettled forward contracts.

The well-known theory of covered interest rate arbitrage, which is the financial underpinning of forward foreign exchange markets, takes into account the time value of money.

Discounting or deriving the NPV of the forward cash flows is necessary to evaluate the financial viability of a forward transaction. It requires the linking of the forward and spot pieces of a forward transaction, while taking into account the funding costs of a forward position.

The choice of accounting methods is the prerogative of firm management. However, if management does not use NPV for valuing its foreign exchange forward books, it must devise an alternative means of controlling the inherent risks. The risks of these actions include:

- Taking "unearned" profits on the spot portion of the forward deal into income immediately and delaying the recognition of trading losses until some point in the future. NPV accounting evaluates the spot and forward pieces of a forward deal together and allows a firm to identify losses earlier.
- Inappropriate economic incentives resulting from inconsistencies between the accounting treatment applied to cash instrument transactions and the accounting treatment accorded other off-balance-sheet instrument transactions. Variances in accounting methods may inadvertently provide an inappropriate financial incentive for a trader to engage in transactions that provide no economic value (or even negative economic value) to the firm.
- Collusion between traders who work at institutions that practice NPV accounting methods and traders who work at institutions that do not. The early close-out of a forward transaction (which would be based on a discount value) could result in an immediate and unanticipated gain or loss being realized on the books of a firm that is not practicing NPV accounting methods.

Management and Human Resources

The previous sections of this document outline the scope and complexity of modern institutional trading activities. In the context of globalization, technological evolution, rapid change, and periodic market turbulence, the critical role of informed and involved senior management is apparent. Sophisticated trading activities require the presence and active involvement of experienced professional managers who can anticipate, understand, and address the risks inherent in the business. The scope of risks as described on page 30 is broader than the specific vocational specialties normally found on a trading floor. Legal, compliance, operational, and accounting perspectives may not intuitively be associated with trading activities, but they can have broad effects. Senior management teams that include people with expertise in a range of risk disciplines should regularly review trading activities.

General Best Practices for All Staff

The following best practices are recommended as standard procedure for all trading parties:

Always use clear market terminology.
At every stage of a transaction, staff should use market terminology that is clear, precise, and understood by all counterparties. The language used should reflect changes in industry practice. Market participants should not use obscure market jargon that may lead to confusion or miscommunication.

Be aware of confidentiality requirements.
Financial market professionals often have access to confidential, proprietary, and other nonpublic information. Accordingly, an organization should have appropriate measures in place to protect the confidentiality and integrity of all information entrusted to it. Customer anonymity should not be circumvented with the use of slang or pseudonyms. If confidentiality is broken, management must act promptly to correct the conditions that allowed the event to occur. Parties should attempt to remedy the breach of confidentiality as soon as possible. Staff should not pass on confidential and nonpublic information outside of their institution. Such information includes discussions with unrelated parties concerning their trades, their trading positions, or the firm's position. It is also inappropriate to disclose, or to request others to disclose, information relating to a counterparty's involvement in a transaction except to the extent required by law. Institutions should develop policies and procedures governing the internal distribution of confidential information.

Trading room staff should take special precautions to avoid situations involving or appearing to involve trading on nonpublic information.

Be responsible in quoting prices.
Staff responsible for dealing prices and authorized to quote such prices electronically or verbally should comply with all pertinent

internal as well as generally accepted market practices. It is unethical (and in many cases illegal) to post firm prices for rate-fixing purposes without having a valid commercial intent to deal at those prices.

Traders are expected to commit to their bids and offers for generally accepted market amounts unless otherwise specified or until:

a) the bid or offer is either dealt on or canceled,

b) the bid or offer is superseded by a better bid or offer, or

c) a broker closes another transaction in that currency with another counterparty at a price other than that originally proposed.

In the cases of (b) or (c), the broker should consider the original bid or offer invalid unless the dealer reinstates it.

The Importance of Good Judgment in a Changing Market

Rules that govern customer confidentiality and privacy could be complicated when information on counterparty roles is shared with numerous financial institutions on the same electronic platform. Market participants should be alert to the possibility that the development of multiple, discrete electronic communication networks could fundamentally change the way the market operates. Organizations are encouraged to monitor relevant developments in electronic commerce and to devise appropriate responses and strategies.

How to Select New Employees

Good staffing is a prerequisite for success in the demanding foreign exchange trading and sales environment. It is a primary management responsibility to recruit, develop, and lead capable individuals and effective teams.

Managers should:

- ensure that prospective staff meet predetermined standards of aptitude, integrity, and stability as well as the necessary certifications or the potential to acquire them;
- exercise caution in delegating hiring decisions;
- encourage fair and inclusive hiring practices and fully screen job candidates by arranging a variety of interviews with different staff members;
- thoroughly check candidates' references; and
- make sure that candidates are fully informed of the firm's expectations concerning responsibilities, profitability requirements, ethical standards, and behavior before they are hired.

Know Your Employees

Management should ensure that they sufficiently monitor the behavioral patterns of their employees in order to discern sudden changes. Additionally, management should monitor for sudden or significant changes in operational results.

Guidelines for Training Trading Desk Staff

a) Ensure that each trader is fully acquainted with the policies and procedures that the institution follows in the conduct of its business and is formally committed to adhering to those policies and procedures.

b) Consider providing a complete orientation for new employees at all levels that would include training in ethical standards and the institution's risk limits as well as implementing formal procedures to ensure that each trader periodically reviews the institution's rules and policies.

c) Encourage awareness of and respect for market procedures and conventions.

d) Make sure roles, responsibilities, and reporting obligations are unambiguous. Procedures, technologies, and contingency protocol should be thoroughly explained. For example, risk measurements and risk reporting should be understood by all involved in trading activities.

e) As new products, policies, and technologies are introduced, ensure that all trading room staff have the appropriate level of ongoing training.

f) Traders and salespeople should be properly trained in the internal policies that clearly define limits of acceptable risk (market, credit, operational, and others).

Compensation

Compensation systems should encourage appropriate behavior that reflects institutional goals and reinforces organizational values.

Vacation Policy

Management should establish a clear vacation policy. It is desirable for traders to take vacation for a consecutive number of days over a reasonable period of time during the year.

Trading for a Personal Account

All staff should be aware that a conflict of interest or an appearance of a conflict of interest may arise if employees are permitted to deal for themselves in commodities or other financial instruments closely related to the ones in which they deal for their institution.

It is management's responsibility to develop and disseminate a clear written policy on trading for a personal account and to establish specific procedures and controls to avoid actual conflicts of interest. Managers must require staff to give full attention to their institution's business activities without being distracted by personal financial affairs or biased by personal financial positions.

Staff should never use their institutional affiliation or take advantage of nonpublic trading information to create trading opportunities for personal gain. Finally, staff must recognize that they are responsible for identifying and avoiding all conflicts of interest or the appearance of conflicts.

Standards and Ethics

Basic Documentation for an Effective Trading Operation

The use of industry-standard documents is strongly encouraged to provide a sound mutual basis for conducting financial market transactions. Market participants should assure themselves, through consultation with counsel, that all documentation is enforceable and effective. There are a variety of documents that ensure the smooth functioning of the markets and protect participants:

Authority documents provide evidence of capacity—the right to enter into a transaction—and authority—permission for individuals to implement the capacity to act on behalf of a counterparty.

Confirmations reflect economic ties agreed to in a transaction between the parties to a trade. The agreement covers the significant terms and conditions of the trades (see the *1998 FX and Currency Option Definitions*, published by the Committee, the International Swaps and Derivatives Association, and the Emerging Markets Traders Association).[27]

Master Agreements contain terms that will apply to broad classes of transactions, expressions of market practice and convention, and terms for netting, termination, and liquidation.

Other forms of documentation may include credit support documents, compensation agreements, margin agreements, and assignment agreements.

Documentation procedures ensure the proper confirmation of all trades with a specific format chosen by the institution.

Ethics

Senior management should establish ethical standards governing the activities of trading and sales professionals to protect the institution's reputation with clients and counterparties. Dealing-room staff must at all times conduct themselves with integrity.

AVOIDING QUESTIONABLE PRACTICES

Traders are often presented with opportunities to accelerate a gain or postpone a loss. Such opportunities may be particularly attractive when staff are dealing in less liquid times, products, or markets. But if the action taken is ethically questionable, it may hurt the reputation of both the trader and his or her institution and may also incur liability. Examples include:

- dissemination of rumors or false information, or a breach of confidentiality through the dissemination of information, to external parties;
- reneging on deals;
- unduly delaying or inconsistently establishing a price; and
- manipulating market practice or convention by, for example, acting in concert with other parties to influence prices.

For all staff, management should:

a) establish a code of conduct that conforms to applicable laws, industry conventions, and bank policies;

b) acknowledge the importance of maintaining the highest ethical standards;

c) ensure that policies and procedures are well circulated and understood;

d) periodically review ethics policies to ensure that they cover new products, business initiatives, and market developments;

e) establish the proper oversight mechanisms for monitoring compliance and dealing swiftly and firmly with violations and complaints; and

f) be alert to aberrant behavior, such as frequent involvement in disputes or acceptance of deals that are obvious misquotes.

ENTERTAINMENT AND GIFTS

Staff should conduct themselves in such a way as to avoid embarrassing situations and the appearance of improper inducement. They should fully understand their institution's guidelines on what constitutes an appropriate gift or entertainment. Staff should also be expected to notify management of any unusual favors offered them by virtue of their position.

Management should make certain that the institution's general guidelines on entertaining and the exchange of gifts address the particular circumstances of their employees. Special attention should be given to the style, frequency, and cost of entertainment afforded trading desks. The institution's general guidelines on entertaining and the exchange of gifts should also address the appropriate scope for offering gifts and entertainment to customers recognizing the risks associated with excessive giving.

ETHICAL STANDARDS TRAINING

Management should review ethical standards with trading employees at least annually. Managers should also educate themselves, their traders, and associates about the signs of substance use and the potential damage from the abuse of alcohol, drugs, or other substances. Policies for dealing with individuals who are found to be substance abusers should be developed and communicated to all staff.

VISITORS

Managers should make sure proper confidential procedures are followed when there are visitors to the trading room. Visits should be prearranged and an employee should accompany all visitors. A visitor from another trading institution should not be permitted to trade for his or her own institution from the premises of the host.

ADDENDUM: Supplemental Guidance during Periods of Significant Market Volatility

This Addendum offers supplemental guidance to market participants in order to promote sound business and fair-dealing practices during periods of significant market volatility. The *Guidelines* and other work of the Committee promote such practices in all trading conditions, although certain practices can be particularly relevant and take on increased importance during periods of significant market volatility. The following guidance highlights these provisions and also finds support in the Trading Principles drafted by a group of leading foreign exchange intermediaries, in response to a recommendation made in the report of the Financial Stability Forum Working Group of Highly-Leveraged Institutions published in April 2000.

Effective Risk Management

The Committee recognizes that, as part of effective risk management, all trading parties need to heighten their emphasis of and sensitivity to market risk and credit management issues during periods of significant market volatility. When an individual currency is experiencing high volatility, intermediaries should use particular care when they extend credit to counterparties in such markets. (For further information on best practices for effective risk management, refer to the Control Functions section of these *Guidelines*, which begins on page 29.)

Dealings with Market Participants

Given the increased potential for confusion and disputes in volatile markets, it is essential that market participants pay close attention to the general expectation (applicable at all times) that they act honestly and in good faith when marketing, entering into, executing, and administering trade orders. Market participants should always act in a manner designed to promote public confidence in the wholesale financial markets.

Counterparties should satisfy themselves that they have the capability (internally or through independent professional advice) to understand the risks of trading at volatile times and to make independent trading decisions. A salesperson at an intermediary has the right, but not the obligation, to convey economic or market information, trading parameters, the institution's views, and personal views, as well as to discuss with the counterparty market conditions and any potentially applicable restrictions relating to transactions. The counterparty should understand that such communications will not constitute investment advice and therefore should not be relied upon, unless this service is specifically contracted for or stipulated in writing. Intermediaries should remain aware that, unless otherwise agreed, an intermediary is not obligated to enter into a transaction with a counterparty under any circumstances.

Stop-Loss Orders and Barrier Options

Intermediaries should ensure there is mutual agreement with counterparties on the basis on which orders are undertaken, in particular stop-loss orders and barrier options, in order to avoid disputes that may arise in connection with execution of such orders as market liquidity fluctuates. In addition, it would be prudent for a counterparty to take steps to ensure that it independently understands market developments and individual trigger levels if an intermediary has not contractually agreed to be an investment advisor to the counterparty.

Execution of Counterparty Orders

Handling of counterparty orders requires standards that promote best execution for the counterparty in accordance with such orders, subject to market conditions. Intermediaries should exercise caution in ensuring that internal guidelines are followed at all times particularly during periods of significant market volatility. (For further information, refer to the Ethics section of these *Guidelines* on page 35.)

Publication of Market Research

Intermediaries should be attentive to the independence and integrity of any market-related research that they publish. Any views expressed in market research constitute the intermediary's understanding of prevailing markets.

Communication of Information

Market participants are encouraged to communicate information regarding market developments with each other during times of volatility, with the understanding that each participant providing and receiving information should view it with particular scrutiny, given the potential for information being false or misleading during periods of volatility. Market participants should pay special attention to internal guidelines on handling false or misleading information, particularly during periods of significant market volatility.

Trading Practices

It is important for market participants to adhere to the general standard (applicable at all times) that they not engage in trading practices that constitute fraudulent, deceptive, or manipulative acts or practices under applicable laws and regulations, or in practices that violate their institution's ethical rules or any rules of electronic trading systems.

Endnotes

1. More information about the Committee, including its most recent annual reports, is available on its website, <http://www.newyorkfed.org/fxc>.

2. The Committee targeted dealer and broker wholesale activity in its 1995 paper, *Principles and Practices for Wholesale Market Transactions*. Because of recent market changes, portions of this report may appear dated. However, other sections, including those treating reliance on advice, confidentiality, and valuation are still present.

3. The Committee's letter on historical rate rollovers, first published in December 1991, continues to offer sound advice to those who need to execute these transactions. The letter, reprinted in the Committee's 1995 *Annual Report*, is available on the Committee's website.

4. For detailed information on best practices and procedures for stop-loss orders, please visit the Committee's website for the *Guide to the International Currency Options Market Master Agreement*. This agreement was published in 1995 and was followed by a February 2000 revision to the barrier options guidelines and a new stop-loss template that was posted on the Committee's website in September 2000. The Committee offered additional recommendations in its 1998 letter, *Handling Stop-Loss Orders in an Electronic Trading Environment*.

5. The Committee published a letter in September 1993 outlining best practices for brokers' switches. A summary of that letter was included in the 1994 *Annual Report*, page 6.

6. Trading on an unnamed basis is often confused with trading on an undisclosed basis (when an intermediary does not explicitly acknowledge that it is acting as an agent at any point in the relationship).

7. A detailed discussion of the risks of unnamed counterparty trading is included in the Committee document, *Information on Unnamed Counterparty Trading*. The Committee's guidance on the issue can be found in several letters to market participants available on the public website.

8. These best practices are contained in the Committee's 2005 publication, *Foreign Exchange Prime Brokerage: Overview and Best Practice Recommendations*.

9. For additional commentary and analysis on electronic trading, see the Committee's 1997 paper, *A Survey Assessing the Impact of Electronic Brokering on the Foreign Exchange Market*.

10. Many of these trade-related problems are addressed in the Committee report, *Principles and Practices for Wholesale Market Transactions*.

11. The Committee's guidance and recommendations on the use of points are included in the 1987 *Annual Report* (page 18), the 1988 *Annual Report* (pages 6-8), the 1989 *Annual Report* (pages 15-23), and the 1991 *Annual Report* (page 25). A U.S. regulatory policy statement prohibiting the use of points is included in the Committee's 1990 *Annual Report* (page 28).

12. A thorough discussion of the concept of arm's-length transactions is included in the Committee document, *Principles and Practices for Wholesale Market Transactions*.

13. This implies a specification of whether the posting is in bid-, mid-, or ask-prices.

14. Indicative basis quotes should be given either verbally or in writing with the appropriate disclosure. While an indicative quote may be used for evaluation purposes, it should not be understood as the price at which a firm would have dealt.

15. The Committee, supported primarily by the efforts of the Operations Managers Working Group, published *Management of Operational Risks in Foreign Exchange* in November 2004. The Committee also published in 2004 *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants*.

16. Operations issues specifically related to collateralized transactions are addressed in the paper, *Managing Operational Risk in Collateralized Foreign Exchange*, published in 1997.

17. More detail on the process of allocating block trades is available in two Committee reports: *Management of Operational Risks in Foreign Exchange* and *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants*, both published in 2004.

18. The Committee's report *Management of Operational Risk in Foreign Exchange* provides guidance on exception processing and escalation procedures (page 28).

19. The report *Management of Operational Risk in Foreign Exchange* contains a process description as well as guidance on netting procedures (pages 29-31).

20. The Financial Markets Lawyers Group (FMLG), an industry organization of lawyers representing major financial institutions, helped draft netting agreements, including the International Foreign Exchange Master Agreement, the International Foreign Exchange and Options Master Agreement, and the International Currency Options Market Master Agreement. These documents, endorsed by the Committee, are available on the FMLG's and the Committee's websites, <http://www.newyorkfed.org/fmlg> and <http://www.newyorkfed.org/fxc>, respectively.

21. The Committee's report *Management of Operational Risk in Foreign Exchange* contains guidance concerning transaction amendments and cancellations (pages 18-19).

22. The BIS Committee on Payment and Settlement Systems' 2007 report, *Progress in Reducing Foreign Exchange Settlement Risk*, contains recommendations for market participants to reduce and control exposures to foreign exchange settlement risk.

23. Duration risk is defined as the sensitivity of the present value of a financial instrument to a change in interest rates; beta risk in equities is defined as the sensitivity of an equity's or portfolio's value to a change in a broad equity index.

24. Additional information on presettlement risk can be found in the Committee's 1992 paper, *Measuring Pre-Settlement Credit Exposures with Loan-Equivalent Risk*.

25. The Committee's publication, *Management of Operational Risk in Foreign Exchange*, contains guidance on access controls (page 44).

26. The Financial Accounting Standards Board's Statement of Financial Accounting Standards no. 133, Accounting for Derivative Instruments and Hedging Activities, was released in June 1998.

27. For certain types of transactions—for example, a nondeliverable forward (NDF)—confirmations play a more significant role in outlining the full extent of the transaction's terms and conditions, including the impact of market disruption events.