The Foreign Exchange Committee

Annual Report 2008

Contents

CHAIR'S LETTER

A year ago in this letter, I cited three Chinese maxims:

May you live in interesting times,

May you come to the attention of those in authority, and

May you find what you are looking for.

As I look back on the events of 2008, these sayings retain their relevance.

The "interesting times" continued through 2008 and into 2009. What began as a financial crisis in 2007 became a global economic crisis in 2008. Although the year was framed by trading scandals, it was dominated by crisis management. The global foreign exchange market was tested and proven to be resilient. Even though disruptions in global funding markets impacted foreign exchange forward and swap markets, the spot market itself functioned quite effectively.

In an event-driven 2008, the Foreign Exchange Committee sought to communicate with, and serve as a consultant to, central banks, government officials, and the marketplace. During the year, the Committee met eight times and conducted ten intermeeting conference calls. Additionally, various working groups and subcommittees met to discuss the effect of credit and liquidity events on foreign exchange market behavior. Particularly in the second half of the year, our emphasis was on counterparty and systemic risk.

The year began with a review of the present state of the currency markets. At that time, the Committee's Technology Working Group focused its efforts on understanding the impact that nonbank financial institutions were having on the foreign exchange market through their use of electronic trading platforms as well as the broader implications for liquidity and operational risk. A separate working group explored initiatives on retail foreign exchange. In addition, the Committee reached out to buy-side participants in the market by forming a subcommittee to discuss their issues and concerns.

In May, the Foreign Exchange Committee revised its *Guidelines for Foreign Exchange Trading Activities.* The "Trading," "Sales," and "Operations" sections were updated, a new "Control Functions" section was added, and reputational and systemic risks were defined and included. This new version of the *Guidelines* also introduced the concept of enterprise risk management. Throughout the year, the Committee had active discussions with the Federal Reserve Bank of New York on the widening of credit spreads, the capital pressures affecting the private sector, and the various Federal Reserve initiatives to alleviate these strains. The Committee also spoke regularly with CLS Bank about its design rules and its role in crisis management. In spring 2008, our members participated in a meeting, hosted by the Bank of England, that brought together foreign exchange committees representing the United Kingdom, Canada, Europe, Japan, Hong Kong, Singapore, Australia, and the United States to discuss market conditions and report on local initiatives. The respective committee secretaries continue to apprise one another of these initiatives.

Developments in algorithmic trading, concerns about clearing and settlement, and the rapid evolution of a prime brokerage business model led to discussions of market infrastructure in 2008; the Committee continues to pursue these conversations in 2009. Last year, a climate clouded by both volatility and risk aversion led to a series of intermeeting conference calls as well as a reexamination of our role in communication during a crisis. Working with the Federal Reserve Bank of New York, we continue to evaluate the best ways to inform the central banking community and the foreign exchange market in times of stress.

Global financial markets clearly managed to "come to the attention of those in authority" in 2008. Policymakers across the world responded to disruptions in the global markets and weakness in the broader economy by launching and expanding an unprecedented number of programs. However, in my view, these markets are far more intertwined than are the countries' political structures. For those active in foreign exchange, it is important to have a clear understanding of both the economic and political contexts in today's markets.

We expect to devote 2009 to learning from the past and anticipating, as best we can, the future. In retrospect, the syndication of some risks appears to have diminished the measurement and management of these risks. The assumption that diversification could minimize the impact of business cycle risk proved naïve. The specter of systemic risk raises questions about social responsibility that may conflict with efficient market theory. In a future governed by greater attention to capital adequacy, some business models will prove obsolete—but new ones will emerge.

Although it is difficult to see beyond the current fog of crisis management, in my opinion the contours of a new landscape are becoming evident. The role of reserve currencies may be changing. Financial markets are evolving—from highly leveraged to capital intensive, from opaque to transparent, from deregulated to regulated.

The future, of course, remains uncertain. In such an environment, the third maxim, "May you find what you are looking for," suggests a goal that is still elusive. Nevertheless, the Foreign Exchange Committee moves forward with the knowledge that despite some difficulties associated with funding market pressures, the global foreign exchange market has demonstrated the resiliency to manage extreme stress. Encouraged by this, we will continue our efforts to enhance efficiency and transparency for all market constituents.

Rich Mahoney

The Foreign Exchange Committee

2008 Annual Report

Actions and Initiatives

Works in Progress for 2009

During the first half of 2008, the Foreign Exchange Committee revised its market guidance to reflect significant developments in the industry over the past few years, including changes in technology as well as in market structure, composition, and participation. An updated version of the *Guidelines for Foreign Exchange Trading Activities* was issued in May 2008 and published in the *2007 Annual Report* that summer. This publication incorporated new or updated recommendations on a variety of issues concerning prime brokerage, dispute resolution, and confirmation and netting; it also highlighted the importance of a sophisticated senior risk management and governance function at an enterprise level.

In 2008, the Committee, in conjunction with the International Swaps and Derivatives Association, Inc., and EMTA, Inc., published additional documentation and guidance on non-deliverable forward foreign exchange transactions and provided updated documentation on foreign exchange definitions.

In 2009, the Committee has a full agenda as it considers the significant implications of recent market events for the future of the global foreign exchange market. In particular, it plans to examine the potential impact of several possible shifts in the market landscape and in risk management practices. Additionally, the Committee intends to strengthen its interaction with other industry groups and with the buy-side community. Maintaining a robust dialogue with these parties as well as with the broader marketplace will be perhaps more crucial than ever as global markets evolve in the years ahead.

Efforts of the Working Groups

The Chief Dealers Working Group will continue to publish the Survey of North American Foreign Exchange Volume. The group will also assist the Committee by providing relevant and timely best practice guidance on foreign exchange trading activities.

The agenda of the Operations Managers Working Group (OMWG) includes continued efforts to promote increased automation and straight-through processing of the foreign exchange option confirmation process, consistent with commitments made to regulators through the President's Working Group on Financial Markets. The OMWG will also examine methods to further mitigate settlement risk, as appropriate; recommend standards for foreign exchange novations processing; and update the Committee on the management of operational risk in foreign exchange, as needed.

Legal Initiatives

Introduction to the FMLG

The Financial Markets Lawyers Group (FMLG) is a committee of lawyers from leading worldwide financial institutions that supports over-the-counter (OTC) foreign exchange and other financial markets trading. The FMLG originated in the late 1980s, when a group of lawyers formed to develop a model master netting agreement for foreign exchange trading in the United States. The FMLG advises the Foreign Exchange Committee on many of its initiatives as well as pursues its own capital markets initiatives. The FMLG is sponsored by, but independent of, the Federal Reserve Bank of New York (FRBNY). A senior FRBNY legal officer chairs the group, and senior staff of the FRBNY's Legal Department are members.

The FMLG has provided support to the Foreign Exchange Committee in the development and publication in 1997 of master netting agreements for foreign exchange transactions—the International Foreign Exchange and Options Master Agreement (FEOMA), the International Foreign Exchange Master Agreement (IFEMA), the International Currency Options Market Master Agreement (ICOM), and the International Foreign Exchange and Currency Option Master Agreement (IFXCO). Recent accomplishments of the FMLG include the introduction, with cosponsors, of the industry's first multilateral master confirmation agreement for non-deliverable forward and non-deliverable options foreign exchange transactions. The FMLG also introduced the industry's first foreign exchange master give-up agreement and cosponsored the *1998 FX and Currency Option Definitions* (*1998 Definitions*). Group members have participated in a number of global initiatives, including the Global Documentation Steering Committee, the Hague Convention on collateral accounts, and industry preparation for Y2K and conversion to the euro. The FMLG continues to draft new trade documentation, best-practice recommendations, legal briefs, comment letters, and policy papers associated with OTC market developments.

The FMLG maintains relationships with OTC industry associations and official institutions worldwide in order to maintain channels of communication and cooperation on issues of importance to the foreign exchange and OTC markets. Among the groups with which the FMLG enjoys close ties are EMTA, Inc., the International Swaps and Derivatives Association, Inc., and the Securities Industry and Financial Markets Association, in the United States; the European Financial Markets Lawyers Group, sponsored by the European Central Bank; the Financial Markets Law Committee and the Foreign Exchange Joint Standing Committee, sponsored by the Bank of England; and CLS Bank. This year, the FMLG hosted a successful quadrilateral meeting of representatives of the European Financial Markets Lawyers Group, the Financial Law Board, and the Financial Markets Law Committee. Meeting participants discussed a wide range of issues, including the market turmoil, bankruptcy law and developments, governance and controls, EU-U.S. global regulatory convergence, and netting and other documentation issues.

FMLG Initiatives during 2008

Many of the FMLG's projects in 2008 underscore its strong bond with the Foreign Exchange Committee. Other efforts reflect the FMLG's policy interests and the cooperative relationship that has evolved among legal-oriented industry groups in the global community.

Practice Notes to the NDF Master Confirmation Agreement

In November 2007, the FMLG, the Foreign Exchange Committee, the Foreign Exchange Joint Standing Committee, and EMTA, Inc., published the industry's first multilateral form of the Master Confirmation Agreement for Non-Deliverable Forward Foreign Exchange Transactions (NDFs). The FMLG coordinated with the same organizations to publish the Practice Notes to the NDF Master Confirmation Agreement in March 2008.

NDO Master Confirmation Agreement

Following the publication of the NDF Master Confirmation Agreement, the FMLG continued to consult with the

Foreign Exchange Committee, the Foreign Exchange Joint Standing Committee, and EMTA, Inc., to develop a Master Confirmation Agreement for Non-Deliverable Currency Option Transactions (NDOs). The agreement is intended to be used bilaterally between market counterparties to confirm non-deliverable currency option transactions. The NDO Master Confirmation Agreement, published in July 2008, incorporates by reference EMTA's recommended terms for non-deliverable currency option transactions. The FMLG also coordinated with EMTA to draft fifteen currency-specific NDO Templates, which are incorporated by reference in the NDO Master Confirmation Agreement.

FMLG Cross-Currency NDF and NDO Template Working Group

The FMLG formed a working group to consider developing cross-currency templates that would provide standardized rate sources to smooth the trading and confirmation process for cross-currency NDFs and NDOs. The working group plans to develop a set of rate source definitions for hard currency pairs that would be published in Annex A to the *1998 Definitions*.

FMLG-CLS Working Group

The FMLG, with the participation of representatives from CLS Bank, established a working group to lend expertise to CLS Bank's efforts to initiate settlement services for NDFs and currency option premiums. The FMLG helped draft the CLS Bank NDF Protocol, which enables market participants to address legal and operational issues in connection with NDF transactions when NDF opening instructions are submitted to the CLS system for settlement in CLS Bank. The CLS Bank NDF Protocol was published in July 2008.

The FMLG also worked closely with CLS Bank to revise the Central Settlement Appendix to the DTCC Deriv/SERV Operating Procedures; the appendix addresses the central settlement facility for warehouse transactions.

OMWG Confirmation White Paper

The FMLG worked closely with the Operations Managers Working Group (OMWG) to begin preparing a white paper on electronic confirmations and their treatment according to each platform's rules.

Foreign Exchange Novations Protocol

The FMLG established a working group with the OMWG to develop a standard protocol for foreign exchange novations, given their increasing use in the market. The working group will collaborate with the International Swaps and Derivatives Association, Inc., to draft a protocol to reduce the incidence of settlement and collateral fails associated with foreign exchange novations.

Prime Brokerage

The FMLG continued its efforts in the prime brokerage area, forming working groups to study foreign exchange prime brokerage relationships and fixed-income prime brokerage principal letters. The FMLG, with the Foreign Exchange Committee, prepared a white paper on prime brokerage reverse give-up relationships to define for market participants the different types of relationships that have emerged and provide an overview of key legal and operational issues associated with reverse give-up trading activities.

Monitoring Legislative, Regulatory, and Judicial Action

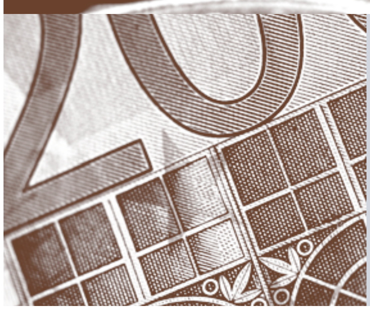
Throughout 2008, the FMLG closely followed pending legislation and regulation that could affect the foreign exchange and financial markets as well as events associated with the financial crisis.

Opinions

The FMLG continued its long-term efforts to coordinate the annual compilation and updating of legal opinions on IFEMA, ICOM, FEOMA, and IFXCO. In 2008, David Miller of the FMLG solicited updated opinions from more than thirty jurisdictions in which member firms are active.

The Foreign Exchange Committee

2008 Annual Report



Publications

Practice Notes

to the Multilateral Master Confirmation Agreement for Non-Deliverable FX Transactions

Introduction

The Foreign Exchange Committee (FXC), EMTA, Inc. (EMTA), and the FX Joint Standing Committee (FX JSC) published the Multilateral Master Confirmation Agreement for Non-Deliverable FX Transactions ("Multilateral Master Confirmation") in October 2007 to provide the market with an additional tool to facilitate the process of confirming non-deliverable forward FX transactions ("NDFs") between counterparties. The Multilateral Master Confirmation follows from the Bilateral Master Confirmation Agreement for NDFs ("Bilateral Master Confirmation"), published by the cosponsors in December 2006, which is designed for execution between two counterparties.

The Financial Markets Lawyers Group (FMLG), which supports the work of the FXC, determined to develop a Multilateral Master Confirmation with three goals in mind. First, the Multilateral Master Confirmation should be available to be administered by any electronic trading or settlement system or organization (such as a trade association) by protocol, rules, or other form of agreement. The publishers encourage systems and organizations to consider the benefits of administering the Multilateral Master Confirmation in order to improve confirmation processes among their membership. At this time, the publishers understand that CLS Bank intends to administer the Multilateral Master Confirmation by changes to its Member Handbook and by protocol in order to apply its terms to NDF Transactions whose payments are processed and settled within CLS Bank.

Second, the Multilateral Master Confirmation is intended to be incorporated by reference as a whole by a system or organization (called a "Sponsor" in the Multilateral Master Confirmation), without changing any of its provisions. However, certain Sponsor-specific provisions would be set out in the Sponsor's rules, protocol, or other form of agreement, such as those relating to the adherence process described in Paragraph 2. In addition, certain default rules may be modified to meet the Sponsor's individual requirements, such as designation of the Calculation Agent in Paragraph 10.

Third, the Multilateral Master Confirmation conforms closely to the Bilateral Master Confirmation's substantive terms, in order to promote consistency in documentation for NDF Transactions across the marketplace. That is, like the Bilateral Master Confirmation, the Multilateral Master Confirmation incorporates by reference the terms of the *1998 FX and Currency Option Definitions,* published by the International Swaps and Derivatives Association, Inc., EMTA, and the FXC ("*1998 Definitions*") and currency-specific NDF Transaction confirmation templates published by EMTA. Accordingly, the Multilateral Master Confirmation offers counterparties the opportunity to streamline their Transaction Confirmations to certain material Economic Terms. Unlike the Bilateral Master Confirmation, the Multilateral Master Confirmation does not have a Schedule in which counterparties may make elections such as designation of a Master Agreement and a Calculation Agent. Default rules for these types of elections have been built into the main body of the Multilateral Master Confirmation because it would apply across multiple counterparties. However, any two Adhering Parties are free to execute a Bilateral Master Confirmation that would apply to their NDF Transactions and supersede any inconsistent terms set out in a Multilateral Master Confirmation (see Paragraph 7 below).

The following Practice Notes further describe the terms of the Multilateral Master Confirmation. Capitalized terms in these Practice Notes have the meanings ascribed to them in the Multilateral Master Confirmation and the *1998 FX and Currency Option Definitions*, unless otherwise defined.

Paragraph 1: Application

The Multilateral Master Confirmation applies to NDF Transactions between two Adhering Parties when, on or after the Effective Date, such NDF Transactions are: (1) entered through the facilities of a Sponsor, or (2) processed or settled (or when the underlying payments related to the NDF Transactions are processed or settled) through the facilities of a Sponsor. Accordingly, the Multilateral Master Confirmation would apply to NDF Transactions that fall under the rules/agreements/procedures of a Sponsor. If there are multiple Sponsors, this published form of the Multilateral Master Confirmation would apply to NDF Transactions between two Adhering Parties that are entered into or processed through the facilities of any of its Sponsors. However, its terms as administered by the relevant

Sponsor would apply to NDF Transactions entered into or processed through the facilities of that Sponsor and not outside of that Sponsor. If counterparties wish to incorporate standard industry terms into NDF Transactions entered into or processed outside of a Sponsor, they should enter into a Bilateral Master Confirmation.

Paragraph 2: Effective Date

The Sponsor of the Multilateral Master Confirmation should determine the adherence process by which its terms will be incorporated by reference and applied to NDF Transactions among the Adhering Parties. The adherence process may involve the submission of adherence letters to a protocol or, alternatively, implementation of provisions in a Sponsor's rules, handbooks, or membership agreements that are binding on all members.

If the adherence process includes a protocol, any requirements relating to the process should be specified in the protocol. This would include the designation of an Effective Date for the Multilateral Master Confirmation. If the process for adherence to a protocol is a finite "window" period, at the end of which all Adhering Parties are deemed to be bound to the Multilateral Master Confirmation, then a single Effective Date that falls after the end of the adherence process can be designated. If the adherence process is a "rolling" one, such that the protocol is continuously open for adherence, the Sponsor could add a provision to the protocol that specifies that as between two Adhering Parties, the Effective Date will be the latest of their respective dates of adherence to the protocol. A similar approach may be taken if the Sponsor determines to bind its membership to the Multilateral Master Confirmation through its rules, handbooks, or other procedures. In such a case, the Sponsor could add a provision that specifies that the Sponsor's members will be deemed to be subject to the Multilateral Master Confirmation as of the time they become subject to the relevant rules, handbooks, or other procedures, and that as between any two Adhering Parties, the Effective Date will be the latter of the dates on which they became members of the Sponsor.

A Sponsor also should consider how it will inform its membership in a timely manner of which of its members are currently Adhering Parties to the Multilateral Master Confirmation. In addition, a Sponsor should consider and delineate whether there will be a process for revocation of adherence to the Multilateral Master Confirmation. One possible approach is to allow any Adhering Party to revoke its adherence to the Multilateral Master Confirmation during a certain period of time on an annual basis. Another possible approach is to prohibit revocation of adherence except upon bilateral agreement between the revoking party and its counterparties. In addition, as noted below (see Paragraph 7), any two Adhering Parties may decide to enter into a Bilateral Master Confirmation whose terms would supersede any inconsistent terms contained in any Multilateral Master Confirmation.

Paragraph 3: FX Definitions

The definitions and provisions contained in the *1998 Definitions*, and any amendments or modifications to the *1998 Definitions* contained in the Master Agreement between two Adhering Parties, are incorporated into the Multilateral Master Confirmation. However, NDF Transactions that have Trade Dates prior to the effective date of any amendments or successor definitions to the *1998 Definitions* will not be affected by those amendments or successor definitions, unless otherwise agreed by the Adhering Parties to that NDF Transaction. Any such amendments or successor definitions would apply to NDF Transactions only on a prospective basis. Two Adhering Parties are free to agree on a bilateral basis to a different default rule that would apply any such amendments or successor definitions retroactively to outstanding NDF Transactions.

Paragraph 4: Transaction Confirmation

A Transaction Confirmation between two Adhering Parties contains the Economic Terms of each NDF Transaction between them (which are specified in Paragraph 6). Paragraph 4 provides that a Transaction Confirmation may be created in several ways, including by an exchange of electronic messages within an electronic trading or settlement system. Matching of electronic messages within a system that administers the Multilateral Master Confirmation is one way in which a Transaction Confirmation may be created, but matching is not specified as a requirement. Some systems instead operate by an exchange of electronic messages between parties that are not matched by the system.

While Paragraph 4 would permit a Transaction Confirmation to be created through the facilities of a system, each firm should review with its counsel whether it would be comfortable with relying on a particular system to confirm its NDF Transactions, in light of applicable law, rules, and procedures specific to the system. For example, at the trade formation stage, firms should consider whether there is a risk that they may not have a mutual, accurate understanding of the terms of their NDF Transaction due to a technological error within the system. This risk is one that Adhering Parties should weigh in determining whether to eliminate bilateral confirmations outside of a system, even if it administers the Multilateral Master Confirmation. The publishers of the Multilateral Master Confirmation do not make any representations regarding whether firms will or should rely on any particular system to confirm their NDF Transactions. However, any system interested in administering the Multilateral Master Confirmation is encouraged to engage in dialogue with its membership and the publishers of the Multilateral Master Confirmation in order to formulate ways of satisfactorily mitigating risks associated with elimination of bilateral confirmations.

Paragraph 4 also specifies that the "Confirmation" between the Adhering Parties for purposes of their Master Agreement is made up of the Multilateral Master Confirmation and the Transaction Confirmation. Paragraph 5 contains a related provision for situations in which EMTA (or a recognized successor) has not published a currency-specific template for an NDF Transaction in a particular Currency Pair. In such a case, certain terms bilaterally agreed between the Adhering Parties may be deemed to be part of their Transaction Confirmation (see Paragraph 5 below).

Paragraph 5: Relevant EMTA Template

Like the Bilateral Master Confirmation, the Multilateral Master Confirmation incorporates into each NDF Transaction governed by it the then-effective template terms for the confirmation of an NDF Transaction in the relevant Currency Pair published by EMTA or a recognized successor, unless the Adhering Parties otherwise agree in a Transaction Confirmation. An example of the EMTA NDF Confirmation template terms that would be incorporated by reference into an NDF Transaction in the relevant Currency Pair is provided in the Practice Notes to the Bilateral Master Confirmation. These terms are non-Economic Terms (e.g., Disruption Events and Disruption Fallbacks, definitions and provisions related to "Unscheduled Holiday" and "Valuation Postponement" for Price Source Disruption). EMTA may publish new NDF confirmation template terms in advance of their specified effective date in order to give the market notice of the new terms and time to make any necessary adjustments. Paragraph 5 provides that the new NDF confirmation template terms will not apply to an NDF Transaction in the relevant Currency Pair until the terms become effective. Only when the terms become effective will the NDF confirmation template fall under the definition of a Relevant EMTA Template in the Multilateral Master Confirmation. In addition, a Relevant EMTA Template's terms will apply to NDF Transactions entered into on or after their effective date, but will not apply to or amend the terms of previously executed NDF Transactions, unless otherwise agreed by the two Adhering Parties.

Two Adhering Parties may agree bilaterally to deviate from the terms of a Relevant EMTA Template in their Transaction Confirmation. In the absence of a bilateral agreement, they could only do so if a Sponsor provided accommodation to Adhering Parties to deviate from the terms of a Relevant EMTA Template. It would be necessary for the Sponsor to provide a functionality (e.g., a field in an electronic message format) in which Adhering Parties may agree to a specialized provision for it to become part of their Transaction Confirmation. However, a Sponsor may rely on the fact that Relevant EMTA Templates provide industry-accepted terms on which to deal in NDF Transactions in particular Currency Pairs in determining to administer the Multilateral Master Confirmation and decline to provide a means of documenting deviations from those terms through the Multilateral Master Confirmation process.

If a Relevant EMTA Template is not in effect for an NDF Transaction in a particular Currency Pair, each counterparty is responsible for managing the confirmation of its own NDF Transactions. Outside of the Multilateral Master Confirmation, NDF Transactions can be confirmed bilaterally under a long-form confirmation or, if the counterparties have adopted the Bilateral Master Confirmation, under a short-form confirmation. Counterparties also may execute trade documentation for NDF Transactions outside of the facilities of a Sponsor and still have the benefit of streamlining their documentation by confirming the Economic Terms of NDF Transactions through the facilities of a Sponsor. The last sentence of Paragraph 5 provides that separate bilateral confirmations become part of the Transaction Confirmation between two Adhering Parties, and thus the Confirmation for purposes of their Master Agreement (see clause (y)). That is, absent a Relevant EMTA Template, clause (y) treats as part of the Transaction Confirmation any bilateral confirmations between two Adhering Parties outside of the Sponsor, so long as the confirmations are executed by the Adhering Parties. An oral agreement on the Trade Date of an NDF Transaction would not be sufficient for this purpose, nor would an exchange of two different forms of confirmations that the Adhering Parties ultimately do not execute. An executed confirmation must follow on or after the Trade Date for its terms to be treated as part of the Transaction Confirmation, and thus the Confirmation for purposes of their Master Agreement.

Absent a Relevant EMTA Template, counterparties also may determine to agree on a bilateral basis to apply certain terms generally to all NDF Transactions between them in the relevant Currency Pair (see clause (x)). Under this provision, the counterparties must explicitly agree to apply such terms on a general basis, and no precedent is set if the counterparties deal on such terms on one or more occasions. Clause (x) in the last sentence of Paragraph 5 treats such terms as part of the Transaction Confirmation, and thus the Confirmation for purposes of their Master Agreement.

Paragraph 6: Economic Terms

Paragraph 6 sets out the Economic Terms of each NDF Transaction that must be specified in the Transaction Confirmation. These Economic Terms are: Trade Date, Reference Currency, Reference Currency Notional Amount, Notional Amount or Forward Rate (one or both of these terms may be specified), Reference Currency Buyer, Reference Currency Seller, Settlement Currency, Valuation Date, Settlement Date, and Settlement. The Economic Terms are not included in a Relevant EMTA Template, except a Relevant EMTA Template will contain certain terms relating to the impact of an Unscheduled Holiday or Price Source Disruption. These terms will automatically apply to an NDF Transaction in the relevant Currency Pair, but the Transaction Confirmation still needs to specify the actual dates that will be the Valuation Date and the Settlement Date.

Electronic trading and settlement systems have different message formats, and it is possible that not all of them will permit specification of all of the Economic Terms in a Transaction Confirmation listed in Paragraph 6. However, parties should be free to agree to use the facilities of various electronic systems to confirm their NDF Transactions under the Master Confirmation. Accordingly, Paragraph 6 allows for the specification of different terms than those listed in Paragraph 6 of the Transaction Confirmation. This alternative is intended to facilitate use of different formats of electronic messaging, and not to provide a broader exception to the need to specify in the Transaction Confirmation the listed Economic Terms, which are material to an NDF Transaction.

Paragraph 6 further specifies that the Transaction Confirmation must provide, or the Adhering Parties must otherwise agree in the Transaction Confirmation, that Settlement is Non-Deliverable for an NDF Transaction to be governed by the Multilateral Master Confirmation. This requirement is intended to provide certainty on the universe of NDF Transactions between the parties that will be covered by the Multilateral Master Confirmation. If an electronic message format does not include a field for specifying that Settlement is Non-Deliverable, it must otherwise be clear from the terms of the Transaction Confirmation that the NDF Transaction is Non-Deliverable. For example, current practice is to include a fixing date in field 77d of the SWIFT MT 300 for a non-deliverable forward fx transaction. Other electronic systems may require use of a particular message type for non-deliverable forward fx transactions.

Paragraph 7: Priority

Paragraphs 7(a) and (b) of the rules of priority specify that the terms of the Confirmation of an NDF Transaction supersede those of the FX Definitions (including any amendments or successors to the *1998 Definitions*, if they apply to an NDF Transaction in accordance with Paragraph 3). In addition, the terms of the Transaction Confirmation supersede those of the Master Agreement and a Relevant EMTA Template for the purpose of the relevant NDF Transaction.

Paragraph 7(c) of the rules of priority address when Adhering Parties to the Multilateral Master Confirmation also have executed a Bilateral Master Confirmation. In the event of any inconsistency between the Bilateral Master Confirmation and the Multilateral Master Confirmation, the Bilateral Master Confirmation will prevail with respect to NDF Transactions governed by it if it is executed after the Effective Date of the Multilateral Master Confirmation, unless otherwise agreed by the Adhering Parties (see clause (i)). Conversely, the Multilateral Master Confirmation will prevail with respect to NDF Transactions governed by it (as specified in Paragraph 1 on its scope) if its Effective Date is on or after the date on which the Bilateral Master Confirmation was executed by the Adhering Parties (see clause (ii)), unless otherwise agreed by the Adhering Parties.

If two Adhering Parties became subject to the Multilateral Master Confirmation on different dates (such as through a "rolling" protocol adherence process), the latter of their dates of adherence ordinarily will be the Effective Date for purposes of determining whether the Bilateral or Multilateral form of the Master Confirmation applies to their NDF Transactions (assuming both agreements otherwise would apply to the NDF Transactions, and there are inconsistent terms). This result would be in keeping with the provision suggested to Sponsors that the Effective Date for purposes of Paragraph 2, as between two Adhering Parties, would be the latest of the respective dates of their adherence to the protocol (discussed above). For example, assume Counterparty A is an Adhering Party to the Multilateral Master Confirmation as of January 15th and proceeds to execute a Bilateral Master Confirmation with Counterparty B as of February 15th, and Counterparty B becomes an Adhering Party to the Multilateral Master Confirmation as of March 15th. NDF Transactions that are entered between Counterparties A and B between February 15th and March 15th will be governed by the Bilateral Master Confirmation, unless they otherwise agree. NDF Transactions that are entered between Counterparties A and B after March 15th will be governed by the Multilateral Master Confirmation, unless they otherwise agree.

Paragraph 8: Quoting Dealer Disclaimer

The quoting dealer disclaimer is commonly used and included in the EMTA NDF confirmation templates to disclose the fact that dealers may be asked to participate in industry-wide surveys that will establish a settlement rate for a Currency Pair that is the subject of an NDF Transaction between the parties.

Paragraph 9: Representations

The representations in Paragraph 9 are standard legal enforceability and non-reliance representations also found in industry master agreements.

Paragraph 10: Calculation Agent

Paragraph 10 provides a default rule for the designation of the Calculation Agent for an NDF Transaction that applies unless the rules, protocol, or other form of agreement of the Sponsor provide otherwise. The appropriateness of this default rule should be considered in light of each potential Sponsor's membership. The default rule provides that (1) both Adhering Parties will be Calculation Agents if they are Members of the Sponsor or dealer affiliates of a Member, (2) both Adhering Parties will be Calculation Agents if neither of them are Members of a Sponsor or dealer affiliates of a Member, and (3) only the Member or its dealer affiliate will be the Calculation Agent if the other party is neither a Member nor a dealer affiliate of a Member. Paragraph 10 also includes a dispute resolution provision that applies when two Adhering Parties to an NDF Transaction are both Calculation Agents.

Paragraph 11: Master Agreement

Paragraph 11 provides a default rule for the Master Agreement between any two Adhering Parties to an NDF Transaction. If the Adhering Parties have executed an ISDA Master Agreement, which governs foreign exchange transactions, or an IFEMA, FEOMA, or IFXCO, then that Master Agreement applies for purposes of the Multilateral Master Confirmation, as it is amended from time to time. However, if the Adhering Parties have not executed a Master Agreement, the Master Agreement that applies for purposes of the Multilateral Master Confirmation will be deemed to be the 2002 ISDA Master Agreement (Multicurrency-Cross Border) without any Schedule, except the governing law shall be New York law and the Termination Currency or Base Currency (as the case may be) shall be U.S. Dollars. The 2002 ISDA Master Agreement was selected as the default Master Agreement because its terms have become generally accepted in the industry. A Sponsor may modify this default rule if it is not appropriate to its own membership by otherwise specifying in its rules, protocol, or other form of agreement.

Paragraph 12: Governing Law/Jurisdiction

The Multilateral Master Confirmation has governing law and submission to jurisdiction provisions that are based on those elected, or deemed to be elected, in the Master Agreement between the two Adhering Parties to an NDF Transaction. This approach was taken because it would be appropriate for the law governing the Master Agreement between the two Adhering Parties to govern NDF Transactions entered and Confirmations executed by the Adhering Parties. These governing law and submission to jurisdiction provisions are separate from those that would govern any protocol or other form of agreement by which a Sponsor would administer the Multilateral Master Confirmation.

COMMITTEE LETTER

Announcing Revisions to the *Guidelines for Foreign Exchange Trading Activities*

May 16, 2008

Dear Market Participant,

I am writing to announce some recent changes to the *Guidelines for Foreign Exchange Trading Activities*. The Foreign Exchange Committee published its first version of the *Guidelines* almost thirty years ago. As the industry evolves, the Committee periodically updates this document. The past few years have witnessed dramatic changes in technology as well as market structure, composition, and participation. The foreign exchange industry, global by nature, has also witnessed significant growth in volume according to official surveys.

The events of the past twelve months underscore the risks described in the *Guidelines*. As these risks are reexamined and repriced, the market will continue to evolve. It is against this background of continual change that the Committee reviewed and updated the *Guidelines*. As both the foreign exchange market and its business models adapt, the Committee will continue to ensure the *Guidelines* remain relevant standards for the industry.

In 2008, the changes indicated below have been introduced into the *Guidelines*:

- The *Guidelines* have been reorganized: Several topics have been consolidated and a new section on Control Functions has been added;
- Language concerning prime brokerage (Trading), dispute resolution (Sales), and confirmation and netting (Operations) has been added or updated;
- Reputational and Systemic risks have been added to the list of exposures in the foreign exchange business, which are defined and described; and
- The importance of a sophisticated senior risk management and governance function at an enterprise level has been highlighted (Management).

The most recent version of the *Guidelines* can always be found on the Foreign Exchange Committee's public website: <http://www.newyorkfed.org/fxc>.

Richard Mahoney
Chairman
Foreign Exchange Committee

Contents

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.

■ ANNOUNCEMENT

New Rate Source Definitions for the Pakistani Rupee and the Vietnamese Dong

New York, June 25, 2008

The International Swaps and Derivatives Association, EMTA, Inc., and the Foreign Exchange Committee today jointly announced amendments to Annex A of the *1998 FX and Currency Option Definitions* (the *1998 Definitions*) to add new rate source definitions for the Pakistani rupee and the Vietnamese dong. Accordingly, effective as of June 25, 2008, Annex A of the *1998 Definitions* is amended to add a new Section 4.5(a)(viii) and a new Section 4.5(a)(ix) as follows:

(viii) **Pakistani Rupee**

(A) "PKR SBPK" or "PKR01" each means that the Spot Rate for a Rate Calculation Date will be the Pakistani Rupee/U.S. Dollar reference rate expressed as the amount of Pakistani Rupees per one U.S. Dollar, for settlement in two Business Days reported by the State Bank of Pakistan (www.sbp.org.pk) at approximately 2:30 p.m., Karachi time, on that Rate Calculation Date.

(B) "SFEMC PKR INDICATIVE SURVEY RATE" or "PKR02" each means that the Spot Rate for a Rate Calculation Date will be the Pakistani Rupee/U.S. Dollar Specified Rate for U.S. Dollars, expressed as the amount of Pakistani Rupees per one U.S. Dollar, for settlement in two Business Days, as published on SFEMC's website (www.sfemc.org) at approximately 3:30 p.m., Singapore time, or as soon thereafter as practicable, on that Rate Calculation Date. The Spot Rate shall be calculated by SFEMC (or a service provider SFEMC may select in its sole discretion) pursuant to the SFEMC PKR Indicative Survey Methodology (which means a methodology, dated as of July 14, 2008, as amended from time to time, for a centralized industry-wide survey of financial institutions that are active participants in the Pakistani Rupee/U.S. Dollar markets for the purpose of determining the SFEMC PKR Indicative Survey Rate).

(ix) **Vietnamese Dong**

(A) "VND ABS" or "VND01" each means that the Spot Rate for a Rate Calculation Date will be the Vietnamese Dong/U.S. Dollar spot rate at 11:00 a.m., Singapore time, expressed as the amount of Vietnamese Dong per one U.S. Dollar, for settlement in two Business Days reported by the Association of Banks in Singapore, which appears on the Reuters Screen ABSIRFIX01 Page to the right of the caption "Spot" under the column "VND" at approximately 11:30 a.m., Singapore time, on that Rate Calculation Date.

(B) "VND FX" or "VND02" each means that the Spot Rate for a Rate Calculation Date will be the Vietnamese Dong/U.S. Dollar spot rate expressed as the amount of Vietnamese Dong per one U.S. Dollar, for settlement in two Business Days, which appears on Reuters Screen VNDFIX=VN Page under the caption "Spot" and to the right of the caption "Average" at approximately 11:00 a.m., Hanoi time, on that Rate Calculation Date.

(C) "SFEMC VND INDICATIVE SURVEY RATE" or "VND03" each means that the Spot Rate for a Rate Calculation Date will be the Vietnamese Dong/U.S. Dollar Specified Rate for U.S. Dollars, expressed as the amount of Vietnamese Dong per one U.S. Dollar, for settlement in two Business Days, as published on SFEMC's website (www.sfemc.org) at approximately 3:30 p.m., Singapore time, or as soon thereafter as practicable, on that Rate Calculation Date. The Spot Rate shall be calculated by SFEMC (or a service provider SFEMC may select in its sole discretion) pursuant to the SFEMC VND Indicative Survey Methodology (which means a methodology, dated as of July 14, 2008, as amended from time to time, for a centralized industry-wide survey of financial institutions that are active participants in the Vietnamese Dong/U.S. Dollar markets for the purpose of determining the SFEMC VND Indicative Survey Rate).

Practitioners' Notes:

- The PKR SBPK rate is also currently published on Reuters Screen SBPK02 Page as the Mid Rate under the Caption "Ready" on the relevant Rate Calculation Date.

- VND ABS refers to a rate reported by the Association of Banks in Singapore (ABS), which is derived from a poll of onshore banks based upon their perception of onshore rates for such currency at 11:00 a.m., Singapore time, and Reuters displays this rate at approximately 11:30 a.m., Singapore time. The ABS polling procedures allow for corrections to be made to a reported rate up to one hour from the time it is reported. Accordingly, in the event of any correction to the displayed rate, practitioners should consult Section 4.7(a) of Annex A. Section 4.7(a) provides that a Spot Rate based on information obtained from the service provider will be subject to any corrections subsequently displayed by the service provider within one hour of the time when a rate is first displayed.
- Parties that specify in confirmations that a particular version of Annex A applies to their trades should reference Annex A effective as of June 25, 2008, if they desire to incorporate the new rate source definitions set forth above into their trades. If parties do not specify in their confirmations a particular version of Annex A, the above rate source definitions will apply to trades that incorporate the *1998 FX and Currency Option Definitions* and have a trade date on or after June 25, 2008.

Second Addendum to the

User's Guide: 2004 Asian Currency Non-Deliverable Foreign Exchange Documentation

PKR/USD Non-Deliverable FX Transaction
VND/USD Non-Deliverable FX Transaction
Effective July 14, 2008

Singapore Foreign Exchange Market Committee
10 Shenton Way
Singapore 079117

EMTA, Inc.
360 Madison Avenue
18th Floor
New York, NY 10017

Foreign Exchange Committee
33 Liberty Street
9th Floor
New York, NY 10045

In 2004, the Singapore Foreign Exchange Market Committee (SFEMC), EMTA, Inc. (EMTA), and the Foreign Exchange Committee (FXC), acting as cosponsors, published updated template terms for non-deliverable foreign exchange (FX) transactions for six Asian currencies (the "2004 Templates"). In 2005, increased activity in the market for Malaysian Ringgit/U.S. Dollar non-deliverable FX transactions led to the development of standardized documentation for non-deliverable MYR/USD FX transactions, and an MYR Addendum was published. In 2006, clarifying amendments were made to the EMTA Template Terms for all currencies, and the documentation for Asian currency NDFs was updated in connection with that effort.

Throughout the next several years, the Asian FX markets continued to develop, bringing increased attention to other currencies in the region, and a working group was constituted in February 2007 to study the need to create standardized terms and practices for non-deliverable forward FX transactions involving the Pakistani Rupee and the Vietnamese Dong.

After a period of study and consultation, a working group recommended to the cosponsors the publication of standard terms for non-deliverable PKR and VND forward FX transactions that are substantially similar to the 2004 SFEMC, EMTA & FXC Template Terms for Asian Currency Non-Deliverable FX Transactions.

The resulting SFEMC, EMTA & FXC Template Terms for PKR/USD (the "PKR Template Terms") and VND/USD (the "VND Template Terms") Non-Deliverable FX Transaction and related documentation represent another collaborative effort of the cosponsors.

The VND Template Terms incorporate a new primary rate source for a VND/USD rate quote, based on a survey of offshore banks performed by the Association of Banks in Singapore (ABS) . This survey is modeled closely on the surveys developed by the ABS for the IDR/USD industry rate quote and the MYR/USD industry rate quote. The new primary rate source definition, referred to as "VND ABS" or "VND01," has been added to Annex A of the *1998 FX and Currency Option Definitions* in an amendment effective concurrently herewith.

The PKR Template Terms reference the State Bank of Pakistan rate quote (SBPK), a definition for which also has been included in Annex A. This rate quote appears on the website of the State Bank of Pakistan and is also currently found on Reuters.

Like the 2004 Templates, the sole Disruption Event in the Template Terms is Price Source Disruption. The Disruption Fallbacks featured in the Template Terms also follow the standard of the 2004 Templates. Specifically, the Disruption Fallbacks are Valuation Postponement, SFEMC Indicative Survey Rate, Fallback Survey Valuation Postponement, and Calculation Agent Determination. New SFEMC Indicative Survey Rate Methodologies, which closely resemble the back-up survey methodologies for the other Asian currencies, have been published in conjunction with the Template Terms. The *User's Guide: 2004 Asian Currency Non-Deliverable Foreign Exchange Documentation* may be consulted for background information on these terms and the fallback survey methodologies.

Finally, carried over from the 2004 Templates into the Template Terms are a 14-day Deferral Period for Unscheduled Holiday/ Maximum Days of Postponement for Price Source Disruption, and a settlement convention of two Business Days, observing both local and Singapore Business Days for Valuation Date purposes, in the case of the Vietnamese Dong.

Pakistani Rupee

2008 Template Terms
Annex A Rate Source Definitions
SFEMC Indicative Survey Methodology

SFEMC, EMTA & FXC Template Terms for PKR/USD Non-Deliverable FX Transaction

General Terms:	
Trade Date:	
[Date of Annex A][1]:	
Reference Currency:	PKR
[Notional Amount][2]:	
[Forward Rate][2]:	
[Reference Currency Notional Amount][2]:	
Reference Currency Buyer:	
Reference Currency Seller:	
Settlement Currency:	U.S. Dollars
Settlement Date:	[DATE CERTAIN], subject to adjustment if the Scheduled Valuation Date is adjusted in accordance with the Following Business Day Convention or if Valuation Postponement applies, and in each such case, the Settlement Date shall be as soon as practicable, but in no event later than two Business Days after the date on which the Spot Rate is determined.
Settlement:	Non-Deliverable
Settlement Rate Option:	PKR SBPK (PKR01)[3]
Valuation Date:	[DATE CERTAIN] ("Scheduled Valuation Date"), subject to adjustment in accordance with the Preceding Business Day Convention; and in the event of an Unscheduled Holiday, subject to adjustment in accordance with the Following Business Day Convention.
Disruption Events:	
Price Source Disruption:	Applicable
Disruption Fallbacks:	
1. Valuation Postponement:	
2. Fallback Reference Price:	SFEMC PKR Indicative Survey Rate (PKR02)[4,5]
3. Fallback Survey Valuation Postponement:	
4. Calculation Agent Determination of Settlement Rate:	
Other Terms:	
"Unscheduled Holiday":	"Unscheduled Holiday" means that a day is not a Business Day and the market was not aware of such fact (by means of a public announcement or by reference to other publicly available information) until a time later than 9:00 a.m. local time in the Principal Financial Center(s) of the Reference Currency two Business Days prior to the Scheduled Valuation Date.

"Deferral Period" for Unscheduled Holiday:	In the event the Scheduled Valuation Date becomes subject to the Following Business Day Convention, and if the Valuation Date has not occurred on or before the 14th consecutive day after the Scheduled Valuation Date (any such period being a "Deferral Period"), then the next day after the Deferral Period that would have been a Business Day but for the Unscheduled Holiday, shall be deemed to be the Valuation Date.
"Valuation Postponement" for Price Source Disruption:	"Valuation Postponement" means, for purposes of obtaining a Settlement Rate, that the Spot Rate will be determined on the Business Day first succeeding the day on which the Price Source Disruption ceases to exist, unless the Price Source Disruption continues to exist (measured from the date that, but for the occurrence of the Price Source Disruption, would have been the Valuation Date) for a consecutive number of calendar days equal to the Maximum Days of Postponement. In such event, the Spot Rate will be determined on the next Business Day after the Maximum Days of Postponement in accordance with the next applicable Disruption Fallback.
"Fallback Survey Valuation Postponement":	"Fallback Survey Valuation Postponement" means that, in the event that the Fallback Reference Price is not available on or before the 3rd Business Day (or day that would have been a Business Day but for an Unscheduled Holiday) succeeding the end of either (i) Valuation Postponement for Price Source Disruption, (ii) Deferral Period for Unscheduled Holiday, or (iii) Cumulative Events, then the Settlement Rate will be determined in accordance with the next applicable Disruption Fallback on such day. For the avoidance of doubt, Cumulative Events, if applicable, does not preclude postponement of valuation in accordance with this provision.
Cumulative Events:	Except as provided below, in no event shall the total number of consecutive calendar days during which either (i) valuation is deferred due to an Unscheduled Holiday, or (ii) a Valuation Postponement shall occur (or any combination of (i) and (ii)), exceed 14 consecutive calendar days in the aggregate. Accordingly, (x) if, upon the lapse of any such 14 day period, an Unscheduled Holiday shall have occurred or be continuing on the day following such period that otherwise would have been a Business Day, then such day shall be deemed to be a Valuation Date, and (y) if, upon the lapse of any such 14 day period, a Price Source Disruption shall have occurred or be continuing on the day following such period on which the Spot Rate otherwise would be determined, then Valuation Postponement shall not apply and the Spot Rate shall be determined in accordance with the next Disruption Fallback.
Maximum Days of Postponement:	14 calendar days
Relevant City for Business Day for Valuation Date:	Karachi
Relevant City for Business Day for Settlement Date:	New York
Calculation Agent:[6]	

ENDNOTES

1. Include only if parties wish to modify the presumption that Annex A is incorporated as amended through the Trade Date.

2. Parties must specify either (a) a Notional Amount and a Reference Currency Notional Amount or (b) a Forward Rate and either a Notional Amount or a Reference Currency Notional Amount.

3. The PKR SBPK Rate is published at approximately 2:30 p.m., Karachi time, on the Valuation Date.

4. The SFEMC PKR Indicative Survey Rate is determined pursuant to the SFEMC PKR Indicative Survey Rate Methodology dated as of July 14, 2008.

5. A party may wish to include the following additional provision if such party is or may be a participant in the SFEMC PKR Indicative Survey:

   [Quoting Dealer Disclaimer:]

   The parties acknowledge that one or both parties to this Transaction acting directly or through a branch or an affiliate may be requested to provide a quotation or quotations from time to time for the purpose of determining the PKR Indicative Survey Rate and such quotation may affect, materially or otherwise, the settlement of the Transaction.

6. The following may be applicable for inter-dealer trades where parties agree to be Joint Calculation Agents:

   Calculation Agents: Party A and Party B

   If the parties are unable to agree on a determination within one Business Day, each party agrees to be bound by the determination of an independent leading dealer in Reference Currency/Settlement Currency Transactions not located in the Reference Currency jurisdiction ("independent leading dealer"), mutually selected by the parties, who shall act as the substitute Calculation Agent, with the fees and expenses of such substitute Calculation Agent (if any) to be met equally by the parties. If the parties are unable to agree on an independent leading dealer to act as substitute Calculation Agent, each party shall select an independent leading dealer and such independent dealers shall agree on an independent third party who shall be deemed to be the substitute Calculation Agent.

Vietnamese Dong

2008 Template Terms
Annex A Rate Source Definitions
SFEMC Indicative Survey Methodology

SFEMC, EMTA & FXC Template Terms for VND/USD Non-Deliverable FX Transaction

General Terms:	
Trade Date:	
[Date of Annex A][1]:	
Reference Currency:	VND
[Notional Amount][2]:	
[Forward Rate][2]:	
Reference Currency Notional Amount][2]:	
Reference Currency Buyer:	
Reference Currency Seller:	
Settlement Currency:	U.S. Dollars
Settlement Date:	[DATE CERTAIN], subject to adjustment if the Scheduled Valuation Date is adjusted in accordance with the Following Business Day Convention or if Valuation Postponement applies, and in each such case, the Settlement Date shall be as soon as practicable, but in no event later than two Business Days after the date on which the Spot Rate is determined.
Settlement:	Non-Deliverable
Settlement Rate Option:	VND ABS (VND01)[3]
Valuation Date:	[DATE CERTAIN] ("Scheduled Valuation Date"), subject to adjustment in accordance with the Preceding Business Day Convention; and in the event of an Unscheduled Holiday, subject to adjustment in accordance with the Following Business Day Convention.
Disruption Events:	
Price Source Disruption:	Applicable
Disruption Fallbacks:	
1. Valuation Postponement:	
2. Fallback Reference Price:	SFEMC VND Indicative Survey Rate (VND03)[4,5]
3. Fallback Survey Valuation Postponement:	
4. Calculation Agent Determination of Settlement Rate:	
Other Terms:	
"Unscheduled Holiday":	"Unscheduled Holiday" means that a day is not a Business Day and the market was not aware of such fact (by means of a public announcement or by reference to other publicly available information) until a time later than 9:00 a.m. local time in the Principal Financial Center(s) of the Reference Currency two Business Days prior to the Scheduled Valuation Date.

"Deferral Period" for Unscheduled Holiday:	In the event the Scheduled Valuation Date becomes subject to the Following Business Day Convention, and if the Valuation Date has not occurred on or before the 14th consecutive day after the Scheduled Valuation Date (any such period being a "Deferral Period"), then the next day after the Deferral Period that would have been a Business Day but for the Unscheduled Holiday, shall be deemed to be the Valuation Date.
"Valuation Postponement" for Price Source Disruption:	"Valuation Postponement" means, for purposes of obtaining a Settlement Rate, that the Spot Rate will be determined on the Business Day first succeeding the day on which the Price Source Disruption ceases to exist, unless the Price Source Disruption continues to exist (measured from the date that, but for the occurrence of the Price Source Disruption, would have been the Valuation Date) for a consecutive number of calendar days equal to the Maximum Days of Postponement. In such event, the Spot Rate will be determined on the next Business Day after the Maximum Days of Postponement in accordance with the next applicable Disruption Fallback.
"Fallback Survey Valuation Postponement":	"Fallback Survey Valuation Postponement" means that, in the event that the Fallback Reference Price is not available on or before the 3rd Business Day (or day that would have been a Business Day but for an Unscheduled Holiday) succeeding the end of either (i) Valuation Postponement for Price Source Disruption, (ii) Deferral Period for Unscheduled Holiday, or (iii) Cumulative Events, then the Settlement Rate will be determined in accordance with the next applicable Disruption Fallback on such day. For the avoidance of doubt, Cumulative Events, if applicable, does not preclude postponement of valuation in accordance with this provision.
Cumulative Events:	Except as provided below, in no event shall the total number of consecutive calendar days during which either (i) valuation is deferred due to an Unscheduled Holiday, or (ii) a Valuation Postponement shall occur (or any combination of (i) and (ii)), exceed 14 consecutive calendar days in the aggregate. Accordingly, (x) if, upon the lapse of any such 14 day period, an Unscheduled Holiday shall have occurred or be continuing on the day following such period that otherwise would have been a Business Day, then such day shall be deemed to be a Valuation Date, and (y) if, upon the lapse of any such 14 day period, a Price Source Disruption shall have occurred or be continuing on the day following such period on which the Spot Rate otherwise would be determined, then Valuation Postponement shall not apply and the Spot Rate shall be determined in accordance with the next Disruption Fallback.
Maximum Days of Postponement:	14 calendar days
Relevant City for Business Day for Valuation Date:	Hanoi and Singapore
Relevant City for Business Day for Settlement Date:	New York
Calculation Agent:[6]	

ENDNOTES

1. Include only if parties wish to modify the presumption that Annex A is incorporated as amended through the Trade Date.

2. Parties must specify either (a) a Notional Amount and a Reference Currency Notional Amount or (b) a Forward Rate and either a Notional Amount or a Reference Currency Notional Amount.

3. The VND ABS (VND01) Rate is published at approximately 11:30 a.m., Singapore time, on the Valuation Date.

4. The SFEMC VND Indicative Survey Rate is determined pursuant to the SFEMC VND Indicative Survey Rate Methodology dated as of July 14, 2008.

5. A party may wish to include the following additional provision if such party is or may be a participant in the SFEMC VND Indicative Survey:

   [Quoting Dealer Disclaimer:]

   The parties acknowledge that one or both parties to this Transaction acting directly or through a branch or an affiliate may be requested to provide a quotation or quotations from time to time for the purpose of determining the SFEMC VND Indicative Survey Rate and such quotation may affect, materially or otherwise, the settlement of the Transaction.

6. The following may be applicable for inter-dealer trades where parties agree to be Joint Calculation Agents:

   Calculation Agents: Party A and Party B

   If the parties are unable to agree on a determination within one Business Day, each party agrees to be bound by the determination of an independent leading dealer in Reference Currency/Settlement Currency Transactions not located in the Reference Currency jurisdiction ("independent leading dealer"), mutually selected by the parties, who shall act as the substitute Calculation Agent, with the fees and expenses of such substitute Calculation Agent (if any) to be met equally by the parties. If the parties are unable to agree on an independent leading dealer to act as substitute Calculation Agent, each party shall select an independent leading dealer and such independent dealers shall agree on an independent third party who shall be deemed to be the substitute Calculation Agent.

Singapore Foreign Exchange Market Committee ("SFEMC")
Pakistani Rupee Indicative Survey Rate Methodology
Dated as of July 14, 2008

Capitalized terms not defined below are defined in the 1998 FX and Currency Option Definitions as published by the International Swaps and Derivatives Association, EMTA, Inc., and the Foreign Exchange Committee, or in the SFEMC, EMTA & FXC Template Terms for PKR/USD Non-Deliverable FX Transaction.

I. The SFEMC PKR Indicative Survey

- **Commencing the PKR Indicative Survey:** SFEMC (itself or through a service provider SFEMC will select in its sole discretion) will conduct a survey of financial institutions for the purpose of determining the SFEMC PKR Indicative Survey Rate, beginning at 11:00 a.m. (Singapore time) or as soon thereafter as practicable on a Business Day in both Karachi and Singapore (or a calendar day that would have been a Business Day but for an Unscheduled Holiday), following any 14-calendar-day period during which valuation is deferred or postponed (or both).

- **Polled Banks:** For purposes of determining the PKR Indicative Survey Rate for a Valuation Date, SFEMC (itself or through a service provider) will survey financial institutions that are active participants in the PKR/U.S. Dollar market (each, a "Participating Bank") and included in a current list of Participating Banks published on the SFEMC's website (www.sfemc.org) (the "Publication Site"). Only one office of each financial institution will be included as a Participating Bank in each PKR Indicative Survey.

- **Survey Question:** Each Participating Bank will be asked to provide its reasonable judgment of what is (or, in the case of an Unscheduled Holiday, would be) the current prevailing free market PKR spot rate (bid-offer pair) for a standard size PKR/U.S. Dollar wholesale financial transaction for same-day settlement in the Karachi marketplace on the Valuation Date. In arriving at this indicative quotation, each Participating Bank will be directed to take such factors into consideration as it deems appropriate, which factors may (but need not) include any or all of the following: the spot rate(s) implied in the offshore non-deliverable foreign exchange market for PKR/U.S. Dollar transactions; the spot rate implied by any other financial market transactions (to the extent that such other financial markets are open for business); the spot rate used in connection with any commercial transactions for goods or services from offshore suppliers or providers; any existing rate for trade finance transactions; and any other existing unofficial rate for PKR/U.S. Dollar transactions (commercial or otherwise).

II. Use of Survey Results

- SFEMC (itself or through a service provider) will determine the mid-point of each bid-offer pair. The arithmetic mean of the mid-points will be used to determine the PKR Indicative Survey Rate, rounded to the fourth decimal point as described below.

- If the PKR Indicative Survey results in 21 or more responses, then the 4 highest and 4 lowest mid-points will be eliminated, and the arithmetic mean of the remaining mid-points will be computed and will constitute the PKR Indicative Survey Rate for such Valuation Date. For purposes of eliminating the 4 highest and 4 lowest mid-points, if more than 4 mid-points have the same highest value or lowest value, then only 4 such mid-points will be eliminated.

- If the PKR Indicative Survey results in less than 21 but 11 or more responses, then the 2 highest and 2 lowest mid-points will be eliminated, and the arithmetic mean of the remaining mid-points will be computed and will constitute the PKR Indicative Survey Rate for such Valuation Date. For purposes of eliminating the 2 highest and 2 lowest mid-points, if more than 2 mid-points have the same highest value or lowest value, then only 2 such mid-points will be eliminated.

- If the PKR Indicative Survey results in less than 11 but 8 or more responses, then the highest and the lowest mid-points will be eliminated and the arithmetic mean of the remaining mid-points will be computed and will constitute the PKR Indicative Survey Rate for such Valuation Date. For purposes of eliminating the highest and lowest mid-points, if more than 1 mid-point has the same highest value or lowest value, then only 1 such mid-point will be eliminated.

- If the PKR Indicative Survey results in less than 8 but 5 or more responses, then no mid-points will be eliminated and the arithmetic mean of all mid-points will be computed and will constitute the PKR Indicative Survey Rate for such Valuation Date.

- Quotes will be provided to the fourth decimal point (e.g., 1.0000).

III. Insufficient Responses

- If the PKR Indicative Survey results in less than 5 responses from Participating Banks ("Insufficient Responses"), no PKR Indicative Survey Rate will be available for the relevant Valuation Date. The next PKR Indicative Survey will take place on the next succeeding Business Day in both Karachi and Singapore (or calendar day that would have been a Business Day but for an Unscheduled Holiday), subject to Section V below.

IV. PKR Indicative Survey Rate Publication

- The PKR Indicative Survey Rate will be published on the Publication Site at 3:30 p.m. (Singapore time), or as soon thereafter as practicable.

- As soon as it is determined that the PKR Indicative Survey will result in Insufficient Responses, a notice that no PKR Indicative Survey Rate is available for the Valuation Date will be published on the Publication Site.

- The response of each Participating Bank to the Indicative Survey (bid-offer pair) will be available on the Publication Site at 9:00 a.m. (Singapore time) on the first Business Day in both Karachi and Singapore (or calendar day that would have been a Business Day but for an Unscheduled Holiday) following the Business Day on which the relevant PKR Indicative Survey Rate is published, or as soon thereafter as practicable.

V. Discontinuing the PKR Indicative Survey

- The PKR Indicative Survey will be discontinued (i) on the calendar day first following the Business Day in both Karachi and Singapore on which the PKR SBPK (PKR01) is available for the determination of a Settlement Rate, or (ii) on the calendar day first following polling for the PKR Indicative Survey that results in Insufficient Responses for three consecutive polling days. Notwithstanding the foregoing, nothing herein will be construed to prevent SFEMC from continuing or re-initiating the PKR Indicative Survey at an appropriate time.

- A notice that the PKR Indicative Survey has been discontinued will be published on the Publication Site.

VI. Amendments to the Methodology

- SFEMC may, in its discretion, from time to time, make such administrative, procedural, or other modifications to this Methodology as are appropriate to ensure the continued operation and integrity of the PKR Indicative Survey.

VII. Disclaimer

- SFEMC (and any service provider SFEMC may select) disclaim liability for the PKR Indicative Survey Rate, and no representation or warranty, express or implied, is made concerning the PKR Indicative Survey Rate (including, without limitation, the methodology for determining the PKR Indicative Survey Rate and its suitability for any particular use).

Singapore Foreign Exchange Market Committee ("SFEMC")
Vietnamese Dong Indicative Survey Rate Methodology
Dated as of July 14, 2008

Capitalized terms not defined below are defined in the 1998 FX and Currency Option Definitions as published by the International Swaps and Derivatives Association, EMTA, Inc., and the Foreign Exchange Committee, or in the SFEMC, EMTA & FXC Template Terms for VND/USD Non-Deliverable FX Transaction.

I. The SFEMC VND Indicative Survey

- **Commencing the VND Indicative Survey:** SFEMC (itself or through a service provider SFEMC will select in its sole discretion) will conduct a survey of financial institutions for the purpose of determining the SFEMC VND Indicative Survey Rate, beginning at 11:00 a.m. (Singapore time) or as soon thereafter as practicable on a Business Day in both Hanoi and Singapore (or a calendar day that would have been a Business Day but for an Unscheduled Holiday), following any 14-calendar-day period during which valuation is deferred or postponed (or both).

- **Polled Banks:** For purposes of determining the VND Indicative Survey Rate for a Valuation Date, SFEMC (itself or through a service provider) will survey financial institutions that are active participants in the VND/U.S. Dollar market (each, a "Participating Bank") and included in a current list of Participating Banks published on the SFEMC's website (www.sfemc.org) (the "Publication Site"). Only one office of each financial institution will be included as a Participating Bank in each VND Indicative Survey.

- **Survey Question:** Each Participating Bank will be asked to provide its reasonable judgment of what is (or, in the case of an Unscheduled Holiday, would be) the current prevailing free market VND spot rate (bid-offer pair) for a standard size VND/U.S. Dollar wholesale financial transaction for same-day settlement in the Hanoi marketplace on the Valuation Date. In arriving at this indicative quotation, each Participating Bank will be directed to take such factors into consideration as it deems appropriate, which factors may (but need not) include any or all of the following: the spot rate(s) implied in the offshore non-deliverable foreign exchange market for VND/U.S. Dollar transactions; the spot rate implied by any other financial market transactions (to the extent that such other financial markets are open for business); the spot rate used in connection with any commercial transactions for goods or services from offshore suppliers or providers; any existing rate for trade finance transactions; and any other existing unofficial rate for VND/U.S. Dollar transactions (commercial or otherwise).

II. Use of Survey Results

- SFEMC (itself or through a service provider) will determine the mid-point of each bid-offer pair. The arithmetic mean of the mid-points will be used to determine the VND Indicative Survey Rate, rounded to the fourth decimal point as described below.

- If the VND Indicative Survey results in 21 or more responses, then the 4 highest and 4 lowest mid-points will be eliminated, and the arithmetic mean of the remaining mid-points will be computed and will constitute the VND Indicative Survey Rate for such Valuation Date. For purposes of eliminating the 4 highest and 4 lowest mid-points, if more than 4 mid-points have the same highest value or lowest value, then only 4 such mid-points will be eliminated.

- If the VND Indicative Survey results in less than 21 but 11 or more responses, then the 2 highest and 2 lowest mid-points will be eliminated, and the arithmetic mean of the remaining mid-points will be computed and will constitute the VND Indicative Survey Rate for such Valuation Date. For purposes of eliminating the 2 highest and 2 lowest mid-points, if more than 2 mid-points have the same highest value or lowest value, then only 2 such mid-points will be eliminated.

- If the VND Indicative Survey results in less than 11 but 8 or more responses, then the highest and the lowest mid-points will be eliminated and the arithmetic mean of the remaining mid-points will be computed and will constitute the VND Indicative Survey Rate for such Valuation Date. For purposes of eliminating the highest and lowest mid-points, if more than 1 mid-point has the same highest value or lowest value, then only 1 such mid-point will be eliminated.

- If the VND Indicative Survey results in less than 8 but 5 or more responses, then no mid-points will be eliminated and the arithmetic mean of all mid-points will be computed and will constitute the VND Indicative Survey Rate for such Valuation Date.

- Quotes will be provided to the fourth decimal point (e.g., 1.0000).

III. Insufficient Responses

- If the VND Indicative Survey results in less than 5 responses from Participating Banks ("Insufficient Responses"), no VND Indicative Survey Rate will be available for the relevant Valuation Date. The next VND Indicative Survey will take place on the next succeeding Business Day in both Hanoi and Singapore (or calendar day that would have been a Business Day but for an Unscheduled Holiday), subject to Section V below.

IV. VND Indicative Survey Rate Publication

- The VND Indicative Survey Rate will be published on the Publication Site at 3:30 p.m. (Singapore time), or as soon thereafter as practicable.

- As soon as it is determined that the VND Indicative Survey will result in Insufficient Responses, a notice that no VND Indicative Survey Rate is available for the Valuation Date will be published on the Publication Site.

- The response of each Participating Bank to the Indicative Survey (bid-offer pair) will be available on the Publication Site at 9:00 a.m. (Singapore time) on the first Business Day in both Hanoi and Singapore (or calendar day that would have been a Business Day but for an Unscheduled Holiday) following the Business Day on which the relevant VND Indicative Survey Rate is published, or as soon thereafter as practicable.

V. Discontinuing the VND Indicative Survey

- The VND Indicative Survey will be discontinued (i) on the calendar day first following the Business Day in both Hanoi and Singapore on which the VND ABS (VND01) is available for the determination of a Settlement Rate, or (ii) on the calendar day first following polling for the VND Indicative Survey that results in Insufficient Responses for three consecutive polling days. Notwithstanding the foregoing, nothing herein will be construed to prevent SFEMC from continuing or re-initiating the VND Indicative Survey at an appropriate time.

- A notice that the VND Indicative Survey has been discontinued will be published on the Publication Site.

VI. Amendments to the Methodology

- SFEMC may, in its discretion, from time to time, make such administrative, procedural, or other modifications to this Methodology as are appropriate to ensure the continued operation and integrity of the VND Indicative Survey.

VII. Disclaimer

- SFEMC (and any service provider SFEMC may select) disclaim liability for the VND Indicative Survey Rate, and no representation or warranty, express or implied, is made concerning the VND Indicative Survey Rate (including, without limitation, the methodology for determining the VND Indicative Survey Rate and its suitability for any particular use).

ANNOUNCEMENT

Contact: Jamie Pfeifer
Telephone: 212-720-1265

Foreign Exchange Committee Releases FX Volume Survey Results

New York, January 27, 2009

The Foreign Exchange Committee today released the results of its ninth Survey of North American Foreign Exchange Volume. For the October 2008 reporting period, key findings include:

- average daily volume in total over-the-counter foreign exchange instruments (including spot transactions, outright forwards, foreign exchange swaps, and options) was $762 billion, an increase of 8.7 percent compared with the October 2007 reporting period;
- average daily volume in spot transactions was 27.0 percent higher than in October 2007, more than offsetting declines in the average daily volume in foreign exchange options and swaps of 35.4 and 16.4 percent, respectively;
- average daily volume for nonfinancial customers across instruments fell 27.6 percent relative to October 2007, whereas the volume for reporting dealers, other dealers, and other financial customers rose modestly, by 11.2, 15.1, and 7.4 percent, respectively;
- average daily ticket volume rose 80.6 percent versus October 2007, resulting in an average trade size of $1.8 million compared with $3.0 million;
- spot market transactions conducted by the top quintile of dealers by market share rose to 79.3 percent from 64.7 percent a year earlier while percentages in all other quintiles declined, suggesting increased market concentration.

"Amid challenging global financial market conditions, the October 2008 survey shows that total foreign exchange volume remained robust and, in fact, increased further relative to the last survey," said Richard Mahoney, Chair of the Foreign Exchange Committee. "I am confident that the latest survey will provide its audience with timely insight into the impact that recent events have had on the foreign exchange market."

The survey was developed in order to provide the market with frequent information on the size and structure of foreign exchange activity in North America. To achieve a representative survey, the Committee invited twenty-eight leading financial institutions active in the North American foreign exchange market to contribute data on the level of turnover during the month of October 2008. The Committee also collaborated with the United Kingdom's Foreign Exchange Joint Standing Committee (FXJSC), the Singapore Foreign Exchange Market Committee (SFEMC), the Canadian Foreign Exchange Committee (CFEC), and the Australian Foreign Exchange Committee (AFXC), which conducted similar surveys for the U.K., Singaporean, Canadian, and Australian markets, respectively, over the same period. The FXJSC, SFEMC, CFEC, and AFXC are also releasing their survey results today.

For the purposes of the survey, turnover is defined as the gross value of all new deals entered into during the reporting period and is measured in terms of the notional amount of the contracts. Survey data are broken out by four foreign exchange instruments, thirteen currency pairs, four counterparty types, and five execution method categories and are reported both in terms of daily average and total monthly volume. The reporting basis for the survey is the location of the price-setting dealer. While similar in nature, the survey is not comparable to the Bank for International Settlements' Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity, given the differences in the reporting methodologies.

The Foreign Exchange Committee includes representatives of major domestic and foreign commercial and investment banks engaged in foreign exchange transactions in the United States, as well as foreign exchange brokers. The Committee's objectives include 1) serving as a forum for the discussion of best practices and technical issues in the foreign exchange market, 2) fostering improvements in risk management in the foreign exchange market by offering recommendations and guidelines, and 3) enhancing the legal certainty of foreign exchange contracts through the development of standard documentation. The Committee was formed in 1978 under the sponsorship of the Federal Reserve Bank of New York.

The results of this survey, together with the list of reporting dealers and explanatory notes, are available online at <www.newyorkfed.org/fxc/volumesurvey>.

The results of the other surveys are also available online as follows:

The Foreign Exchange Joint Standing Committee's survey for the U.K. market:
<http://www.bankofengland.co.uk/markets/forex/fxjsc/index.htm>

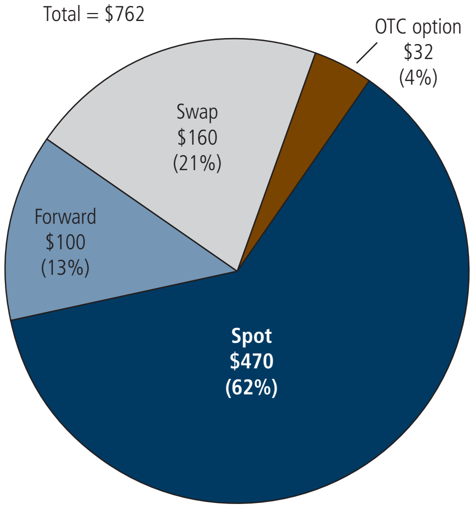
The Singapore Foreign Exchange Market Committee's survey for the Singaporean market:
<http://www.sfemc.org/statistics.asp>

The Canadian Foreign Exchange Committee's survey for the Canadian market:
<http://www.cfec.ca/fx_volume.html>

The Australian Foreign Exchange Committee's survey for the Australian market:
<http://www.rba.gov.au/AFXC/Statistics/FXTurnoverReports/2008/Oct_2008/index.html>.

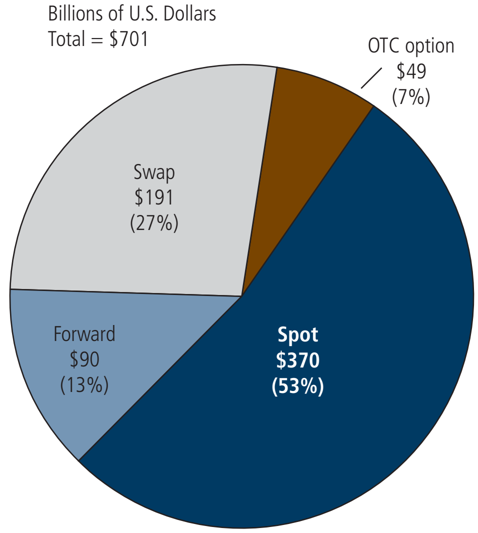
Average Daily Volume by Instrument Type, October 2008

Billions of U.S. Dollars
Total = $762



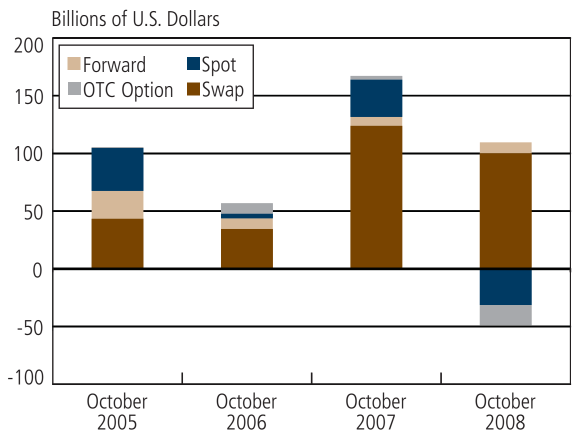
Average Daily Volume by Instrument Type, October 2007

Billions of U.S. Dollars
Total = $701

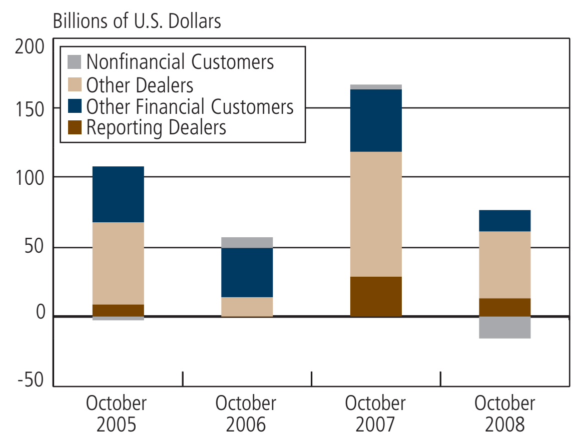


*Volume figures include spot, forwards, swaps, and options. The data are unadjusted for double-counting among reporting dealers.

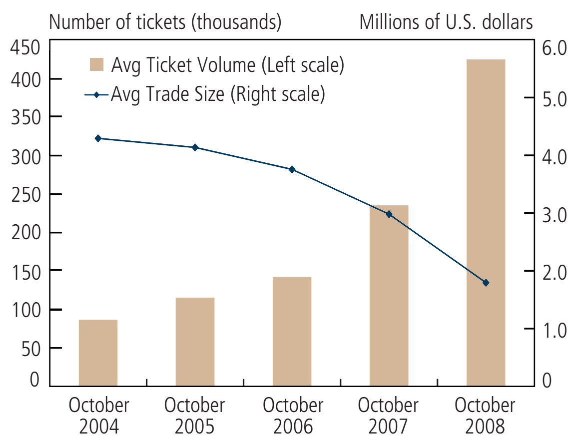
Annual Changes in Daily Foreign Exchange Volume by Instrument Type



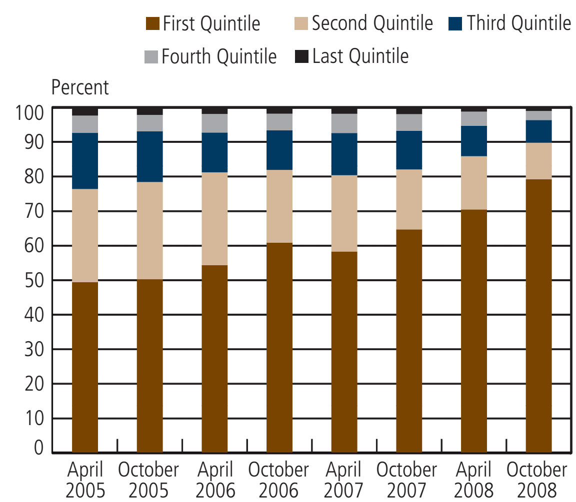
Annual Changes in Daily Foreign Exchange Volume by Counterparty Type



Average Daily Ticket Volume Versus Average Trade Size



Foreign Exchange Spot Market Share by Quintile



Note: Each quintile contains about six dealers.

Survey of North American Foreign Exchange Volume

Explanatory Notes

Survey Terms and Methods

The Survey of North American Foreign Exchange Volume is designed to measure the level of turnover in the foreign exchange market. The survey defines foreign exchange transactions as spot, forwards, swaps, and options that involve the exchange of two currencies. Turnover is defined as the gross value in U.S. dollar equivalents of purchases and sales entered into during the reporting period. The data cover a one-month period in order to reduce the likelihood that very short-term variations in activity might distort the data.

Turnover is measured in terms of nominal or notional amount of the contracts. No distinction is made between sales and purchases (for example, a purchase of $3 million against the U.S. dollar and a sale of $2 million against the U.S. dollar would amount to a gross turnover of $5 million). Nondollar amounts are converted using the prevailing exchange rate on the transaction date. Direct cross-currency transactions are counted as a single transaction.

Transactions passing through a vehicle currency are counted as two separate transactions against the vehicle currency (for example, if a bank sells $1 million against the euro and then uses the euro to purchase Japanese yen, the reported turnover would be $2 million). Transactions with variable nominal or notional principal amounts are reported using the principal amount on the transaction date.

The data collected for the survey reflect all transactions entered into during the reporting month, regardless of whether delivery or settlement is made during the month.

Average daily turnover was obtained by dividing the total volume reported by twenty-two trading days in the United States in April 2008 and by twenty-three trading days in the United States in October 2008. There were thirty reporting dealers for the April survey and twenty-eight reporting dealers for the October survey.

Consolidation Rules

The survey covers all transactions that are priced or facilitated by traders in North America (the United States, Canada, and Mexico). Transactions concluded by dealers outside of North America are excluded even if they are booked to an office within North America. The survey also excludes transactions between branches, subsidiaries, affiliates, and trading desks of the same firm.

Instruments

The survey is divided into separate schedules by product type. If a transaction is composed of several component instruments, each part in principle is reported separately, if feasible.

- Spot transactions are single outright transactions that involve the exchange of two currencies at a rate agreed to on the date of the contract for value or delivery within two business days, including U.S. dollar-Canadian dollar (USD-CAD) transactions delivered within one day.
- Outright forwards involving the exchange of two currencies at a rate agreed to on the date of the contract for value or delivery at some time in the future (more than one business day for USD-CAD transactions or more than two business days for all other transactions). This category also includes forward foreign exchange agreement transactions (FXA), non-deliverable forwards, and other forward contracts for differences.
- Foreign exchange swaps involve the exchange of two currencies on a specific date at a rate agreed to at the time of the conclusion of the contract, and a reverse exchange of the same two currencies at a date further in the future at a rate agreed to at the time of the contract. For measurement purposes, only the long leg of the swap is reported so that each transaction is recorded only once.

- Currency options are over-the-counter contracts that give the right or the obligation—depending on whether the reporter is the purchaser or the writer—to buy or sell a currency with another currency at a specified exchange rate during a specified time period. This category also includes exotic foreign exchange options such as average rate options and barrier options.

Counterparties
The survey covers four types of counterparties:

- reporting dealers participating in the survey,
- other foreign exchange dealers that do not participate in the survey,
- other financial customers that are end-users in the foreign exchange market, and
- nonfinancial customers for all other counterparties not defined above.

Transactions between two reporting dealers are reported twice, once by each dealer. The total figures are adjusted to avoid the double counting of such trades.

Maturities
Turnover reported in forwards and swaps is further broken down by original contractual maturity using the following three splits:

- up to one month, including contracts having an original maturity of less than thirty-one calendar days,
- one month to one year, including contracts having an original maturity of thirty-one calendar days but no more than one year, and
- more than one year, including contracts with an original maturity of more than one year.

Turnover reported for options is broken down by maturity using the following three splits:

- up to one month, including options with an expiration date of less than thirty-one calendar days,
- one to six months, including options with expirations of 31 to 180 calendar days, and
- more than six months, including options with expirations of more than 180 calendar days.

Execution Method
All transactions are also reported according to the execution method used to settle the transaction. Execution method is broken down into the following five categories:

- interbank direct transactions between two dealers in which both dealers participate in the semiannual survey and are not intermediated by a third party (for example, executed via direct telephone communication or direct electronic dealing systems such as Reuters Conversational Dealing),
- customer direct transactions between the reporting dealer and customers or nonreporting dealers that are not intermediated by a third party (for example, executed via direct telephone communication or direct electronic dealing systems such as Reuters Conversational Dealing),
- electronic broking systems transactions that are conducted via an automated order matching system for foreign exchange dealers (for example, EBS and Reuters Matching 2000/2),
- electronic trading systems transactions that are conducted via multibank dealing systems and single-bank proprietary platforms that are generally geared toward customers (for example, FXall, Currenex, FXConnect, Globalink, and eSpeed), and
- voice broker transactions that are conducted via telephone communication with a foreign exchange voice broker.

In addition, a separate item capturing the total number of trades is reported for each currency pair and instrument type.

Reporting Dealers

ABN AMRO

Bank of America

Bank of Montreal

The Bank of New York

Bank of Tokyo-Mitsubishi

Barclays Capital

BNP Paribas

Calyon

Canadian Imperial Bank of Commerce

Citigroup

CSFB

Deutsche Bank AG

Dresdner Bank AG

Goldman Sachs & Co.

HSBC Bank USA

JP Morgan Chase Bank

Merrill Lynch

Mizuho Corporate Bank

Morgan Stanley

Royal Bank of Canada

Royal Bank of Scotland

Skandinaviska Enskilda Bank

Société Générale

Standard Chartered

State Street Corporation

Sumitomo Mitsui Banking Corporation

UBS Bank

Wells Fargo Bank N.A.

MARKET SHARE, October 2008

Percent

Instrument	First Quintile (Six Dealers)	Second Quintile (Six Dealers)	Third Quintile (Six Dealers)	Fourth Quintile (Five Dealers)	Last Quintile (Five Dealers)
SPOT TRANSACTIONS					
Ranges held	≥2.68	2.40 - 1.50	1.44 - 0.81	0.80 - 0.27	≤0.27
Market share	79.25	10.57	6.54	2.62	1.02
OUTRIGHT FORWARDS					
Ranges held	≥6.55	5.03 - 1.90	1.82 - 0.97	0.76 - 0.16	≤0.16
Market share	67.02	21.96	8.47	1.95	0.60
FOREIGN EXCHANGE SWAPS					
Ranges held	≥6.03	5.39 - 2.95	2.55 - 1.67	1.60 - 0.54	≤0.54
Market share	55.40	24.13	12.84	6.28	1.35
OTC FOREIGN EXCHANGE OPTIONS					
Ranges held	≥6.96	6.40 - 3.23	2.04 - 1.06	0.99 - 0.23	≤0.23
Market share	59.99	28.18	8.55	2.84	0.42

Counterparty	First Quintile (Six Dealers)	Second Quintile (Six Dealers)	Third Quintile (Six Dealers)	Fourth Quintile (Five Dealers)	Last Quintile (Five Dealers)
REPORTING DEALERS					
Ranges held	≥6.22	5.13 - 2.66	2.55 - 1.00	0.92 - 0.37	≤0.37
Market share	61.69	21.90	11.84	3.04	1.50
OTHER DEALERS					
Ranges held	≥3.18	3.17 - 1.94	1.85 - 1.16	0.98 - 0.28	≤0.28
Market share	72.07	14.97	9.11	3.23	0.62
OTHER FINANCIAL CUSTOMERS					
Ranges held	≥4.84	3.34 - 1.50	1.48 - 0.33	0.22 - 0.03	≤0.03
Market share	78.98	15.15	5.25	0.56	0.06
NONFINANCIAL CUSTOMERS					
Ranges held	≥4.23	3.22 - 1.98	1.87 - 1.13	0.74 - 0.37	≤0.37
Market share	70.53	16.30	9.30	2.61	1.27

Notes: The data are adjusted for double reporting of trades between reporting dealers. Total market share may not sum to 100 percent because of rounding.

MARKET SHARE, October 2008

Percent

Currency Pair	First Quintile (Six Dealers)	Second Quintile (Six Dealers)	Third Quintile (Six Dealers)	Fourth Quintile (Five Dealers)	Last Quintile (Five Dealers)
U.S. DOLLAR VERSUS					
Euro					
Ranges held	≥4.08	3.55 - 1.93	1.82 - 0.79	0.75 - 0.16	≤0.16
Market share	73.18	15.19	8.08	2.94	0.60
Japanese yen					
Ranges held	≥3.85	2.88 - 1.60	1.37 - 0.71	0.67 - 0.37	≤0.37
Market share	77.33	12.66	6.27	2.74	0.99
British pound					
Ranges held	≥5.05	4.97 - 2.27	1.66 - 1.05	1.01 - 0.21	≤0.21
Market share	68.82	19.18	7.73	3.62	0.64
Canadian dollar					
Ranges held	≥5.37	5.17 - 2.93	2.57 - 1.74	1.58 - 0.38	≤0.38
Market share	55.50	24.64	13.47	5.55	0.82
Swiss franc					
Ranges held	≥2.74	2.64 - 1.65	1.55 - 0.81	0.63 - 0.11	≤0.11
Market share	77.82	12.88	6.88	2.05	0.39
Australian dollar					
Ranges held	≥4.16	4.03 - 1.79	1.54 - 0.93	0.70 - 0.27	≤0.27
Market share	72.25	17.24	7.41	2.45	0.66
Argentine peso					
Ranges held	≥8.16	5.58 - 1.23	1.23 - 0.08	0.05 - 0.00	≤0.00
Market share	77.87	18.86	3.22	0.05	0.00
Brazilian real					
Ranges held	≥6.68	6.10 - 2.98	2.25 - 0.98	0.05 - 0.00	≤0.00
Market share	63.97	26.99	8.91	0.15	0.00
Chilean peso					
Ranges held	≥5.02	4.80 - 1.43	1.28 - 0.06	0.05 - 0.00	≤0.00
Market share	75.42	21.55	2.99	0.07	0.00
Mexican peso					
Ranges held	≥6.06	5.70 - 2.43	2.11 - 1.24	1.11 - 0.06	≤0.06
Market share	61.33	24.69	9.70	4.16	0.13
All other currencies					
Ranges held	≥8.04	4.31 - 3.02	2.97 - 1.26	0.86 - 0.26	≤0.26
Market share	65.00	20.34	11.41	2.70	0.55
EURO VERSUS					
Japanese yen					
Ranges held	≥3.21	2.09 - 0.92	0.77 - 0.35	0.34 - 0.15	≤0.15
Market share	86.55	8.11	3.53	1.33	0.47
British pound					
Ranges held	≥3.90	3.32 - 1.60	1.12 - 0.68	0.60 - 0.21	≤0.21
Market share	79.43	13.14	5.14	1.80	0.49
Swiss franc					
Ranges held	≥2.87	2.38 - 1.32	1.10 - 0.41	0.39 - 0.10	≤0.10
Market share	82.90	10.75	4.70	1.30	0.37
ALL OTHER CURRENCY PAIRS					
Ranges held	≥5.25	3.96 - 2.45	1.90 - 1.03	1.00 - 0.36	≤0.36
Market share	68.57	18.33	8.95	3.44	0.73

Notes: The data are adjusted for double reporting of trades between reporting dealers. Total market share may not sum to 100 percent because of rounding.

MARKET SHARE, April 2008

Percent

Instrument	First Quintile (Six Dealers)	Second Quintile (Six Dealers)	Third Quintile (Six Dealers)	Fourth Quintile (Six Dealers)	Last Quintile (Six Dealers)
SPOT TRANSACTIONS					
Ranges held	≥3.71	3.64 - 1.78	1.77 - 1.18	0.96 - 0.37	≤0.27
Market share	70.46	15.43	8.81	4.09	1.21
OUTRIGHT FORWARDS					
Ranges held	≥5.57	5.55 - 2.59	2.47 - 0.85	0.83 - 0.33	≤0.31
Market share	61.28	24.47	9.70	3.54	1.02
FOREIGN EXCHANGE SWAPS					
Ranges held	≥5.73	5.36 - 4.08	3.90 - 1.65	1.65 - 0.46	≤0.45
Market share	47.19	27.52	17.79	6.07	1.46
OTC FOREIGN EXCHANGE OPTIONS					
Ranges held	≥4.72	4.66 - 3.41	3.09 - 0.98	0.98 - 0.43	≤0.11
Market share	58.07	25.06	12.53	4.11	0.24

Counterparty	First Quintile (Six Dealers)	Second Quintile (Six Dealers)	Third Quintile (Six Dealers)	Fourth Quintile (Six Dealers)	Last Quintile (Six Dealers)
REPORTING DEALERS					
Ranges held	≥5.93	4.65 - 2.69	2.34 - 1.53	1.47 - 0.72	≤0.41
Market share	58.91	22.11	11.04	6.14	1.79
OTHER DEALERS					
Ranges held	≥3.52	3.39 - 2.59	2.52 - 1.64	0.99 - 0.42	≤0.33
Market share	64.44	17.52	13.08	4.14	0.80
OTHER FINANCIAL CUSTOMERS					
Ranges held	≥5.68	5.17 - 2.38	2.07 - 0.36	0.15 - 0.05	≤0.04
Market share	70.30	21.82	7.27	0.51	0.10
NONFINANCIAL CUSTOMERS					
Ranges held	≥6.06	5.87 - 2.27	1.89 - 1.28	1.23 - 0.44	≤0.42
Market share	62.79	21.03	9.91	4.58	1.69

Notes: The data are adjusted for double reporting of trades between reporting dealers. Total market share may not sum to 100 percent because of rounding.

MARKET SHARE, April 2008
Percent

Currency Pair	First Quintile (Six Dealers)	Second Quintile (Six Dealers)	Third Quintile (Six Dealers)	Fourth Quintile (Six Dealers)	Last Quintile (Six Dealers)
U.S. DOLLAR VERSUS					
Euro					
Ranges held	≥4.82	4.07 - 2.52	2.36 - 1.56	1.35 - 0.34	≤0.32
Market share	62.68	19.27	12.00	4.94	1.12
Japanese yen					
Ranges held	≥4.71	4.50 - 2.27	1.96 - 1.17	0.98 - 0.51	≤0.45
Market share	65.07	18.82	9.94	4.65	1.51
British pound					
Ranges held	≥4.90	4.79 - 2.71	2.47 - 0.91	0.90 - 0.27	≤0.27
Market share	63.32	22.13	10.21	3.46	0.87
Canadian dollar					
Ranges held	≥5.99	5.26 - 3.80	3.58 - 1.66	1.43 - 0.26	≤0.25
Market share	54.45	26.14	14.66	3.99	0.75
Swiss franc					
Ranges held	≥4.08	3.56 - 1.82	1.76 - 0.91	0.85 - 0.17	≤0.16
Market share	72.58	16.10	8.08	2.71	0.50
Australian dollar					
Ranges held	≥5.37	5.17 - 2.07	2.02 - 0.83	0.80 - 0.28	≤0.27
Market share	67.09	22.44	7.21	2.60	0.65
Argentine peso					
Ranges held	≥5.86	5.70 - 2.60	1.65 - 0.04	0.01 - 0.00	≤0.00
Market share	73.68	22.54	3.77	0.01	0.00
Brazilian real					
Ranges held	≥5.39	5.39 - 1.81	1.62 - 0.58	0.52 - 0.00	≤0.00
Market share	72.27	20.55	6.30	0.85	0.00
Chilean peso					
Ranges held	≥5.00	3.86 - 1.71	1.68 - 0.24	0.18 - 0.00	≤0.00
Market share	76.43	17.23	6.00	0.34	0.00
Mexican peso					
Ranges held	≥6.49	6.35 - 3.13	2.69 - 1.37	1.28 - 0.20	≤0.09
Market share	55.61	27.51	11.55	5.18	0.13
All other currencies					
Ranges held	≥7.52	6.83 - 3.22	2.84 - 0.83	0.76 - 0.34	≤0.30
Market share	61.03	25.89	8.86	3.44	0.79
EURO VERSUS					
Japanese yen					
Ranges held	≥3.28	3.23 - 1.42	1.05 - 0.71	0.57 - 0.24	≤0.22
Market share	78.54	13.35	5.14	2.10	0.89
British pound					
Ranges held	≥4.03	3.97 - 2.17	1.78 - 1.21	0.64 - 0.23	≤0.21
Market share	68.92	18.70	9.19	2.58	0.61
Swiss franc					
Ranges held	≥3.09	2.88 - 1.65	1.58 - 1.01	0.63 - 0.10	≤0.09
Market share	76.23	14.23	7.61	1.62	0.29
ALL OTHER CURRENCY PAIRS					
Ranges held	≥7.11	6.81 - 2.86	1.83 - 1.62	1.58 - 0.44	≤0.32
Market share	53.84	28.62	10.43	6.28	0.83

Notes: The data are adjusted for double reporting of trades between reporting dealers. Total market share may not sum to 100 percent because of rounding.

1. TOTAL FOREIGN EXCHANGE VOLUME, October 2008

Millions of U.S. Dollars

AVERAGE DAILY VOLUME

Instrument	Current Amount Reported	Dollar Change over Previous Year	Percentage Change over Previous Year
Spot transactions	470,384	100,110	27.0
Outright forwards	99,667	9,496	10.5
Foreign exchange swaps	159,973	-31,439	-16.4
OTC foreign exchange options	31,633	-17,332	-35.4
Total	**761,657**	**60,835**	**8.7**

TOTAL MONTHLY VOLUME

Instrument	Current Amount Reported	Dollar Change over Previous Year	Percentage Change over Previous Year
Spot transactions	10,818,847	2,302,518	27.0
Outright forwards	2,292,394	218,348	10.5
Foreign exchange swaps	3,679,345	-723,154	-16.4
OTC foreign exchange options	727,530	-398,687	-35.4
Total	**17,518,116**	**1,399,025**	**8.7**

Note: The lower table reports notional amounts of total monthly volume adjusted for double reporting of trades between reporting dealers; there were twenty-three trading days in October 2007 and twenty-three in October 2008.

2a. SPOT TRANSACTIONS, Average Daily Volume, October 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	26,118	92,139	42,151	4,576	164,984
Japanese yen	14,725	47,556	18,648	1,725	82,654
British pound	6,518	18,880	11,233	1,662	38,293
Canadian dollar	5,359	11,565	5,961	1,830	24,715
Swiss franc	3,283	10,461	5,754	382	19,880
Australian dollar	3,198	8,754	5,632	504	18,088
Argentine peso	81	103	108	21	313
Brazilian real	593	774	648	120	2,135
Chilean peso	130	328	133	7	598
Mexican peso	2,594	5,246	1,691	402	9,933
All other currencies	3,201	6,805	8,248	1,446	19,700
EURO VERSUS					
Japanese yen	5,168	24,953	11,074	661	41,856
British pound	1,721	7,475	3,281	380	12,857
Swiss franc	1,883	7,917	5,515	226	15,541
ALL OTHER CURRENCY PAIRS	2,708	10,258	5,165	706	18,837
Total[a]	**77,280**	**253,214**	**125,242**	**14,648**	**470,384**

2b. OUTRIGHT FORWARDS, Average Daily Volume, October 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	1,763	4,804	16,544	4,531	27,642
Japanese yen	1,003	2,795	7,878	1,386	13,062
British pound	729	1,759	6,552	1,104	10,144
Canadian dollar	412	1,084	3,957	1,594	7,047
Swiss franc	312	687	2,051	554	3,604
Australian dollar	347	1,294	2,894	490	5,025
Argentine peso	148	86	67	47	348
Brazilian real	1,300	1,193	2,010	188	4,691
Chilean peso	346	322	90	20	778
Mexican peso	328	609	971	420	2,328
All other currencies	2,701	2,999	8,545	1,400	15,645
EURO VERSUS					
Japanese yen	208	670	731	147	1,756
British pound	63	494	613	145	1,315
Swiss franc	164	495	853	81	1,593
ALL OTHER CURRENCY PAIRS	350	945	2,843	551	4,689
Total[a]	**10,174**	**20,236**	**56,599**	**12,658**	**99,667**

Notes: The tables report notional amounts of average daily volume adjusted for double reporting of trades between reporting dealers. The amounts are averaged over twenty-three trading days in October.

[a]Figures may not sum to totals because of rounding.

2c. FOREIGN EXCHANGE SWAPS, Average Daily Volume, October 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	7,432	24,672	11,126	2,417	45,647
Japanese yen	7,633	11,298	4,771	666	24,368
British pound	2,582	8,545	4,840	777	16,744
Canadian dollar	7,870	15,686	4,356	1,677	29,589
Swiss franc	1,930	5,917	1,200	159	9,206
Australian dollar	1,093	4,045	1,599	246	6,983
Argentine peso	7	7	5	0	19
Brazilian real	93	23	52	4	172
Chilean peso	18	53	12	0	83
Mexican peso	2,704	4,955	1,351	227	9,237
All other currencies	2,770	6,713	2,610	465	12,558
EURO VERSUS					
Japanese yen	51	122	289	40	502
British pound	60	219	255	232	766
Swiss franc	39	96	146	98	379
ALL OTHER CURRENCY PAIRS	180	1,742	1,436	362	3,720
Total[a]	**34,462**	**84,093**	**34,048**	**7,370**	**159,973**

2d. OTC FOREIGN EXCHANGE OPTIONS, Average Daily Volume, October 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	2,900	2,361	2,117	1,361	8,739
Japanese yen	1,153	1,639	1,283	1,834	5,909
British pound	506	374	350	505	1,735
Canadian dollar	557	956	247	382	2,142
Swiss franc	258	188	116	186	748
Australian dollar	140	124	399	325	988
Argentine peso	25	6	3	1	35
Brazilian real	481	421	512	263	1,677
Chilean peso	17	21	1	10	49
Mexican peso	367	608	498	148	1,621
All other currencies	670	462	588	1,004	2,724
EURO VERSUS					
Japanese yen	219	251	402	321	1,193
British pound	327	271	264	55	917
Swiss franc	337	278	252	160	1,027
ALL OTHER CURRENCY PAIRS	699	599	557	274	2,129
Total[a]	**8,656**	**8,559**	**7,589**	**6,829**	**31,633**

Notes: The tables report notional amounts of average daily volume adjusted for double reporting of trades between reporting dealers. The amounts are averaged over twenty-three trading days in October.

[a]Figures may not sum to totals because of rounding.

2e. AVERAGE DAILY VOLUME, by Execution Method and Currency Pair, October 2008

Columns 1-6 in Millions of U.S. Dollars

	Execution Method						
Currency Pair	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
U.S. DOLLAR VERSUS							
Euro	19,628	92,509	59,328	72,769	40,988	285,222	111,000
Japanese yen	11,255	48,059	29,142	37,673	24,376	150,505	85,141
British pound	5,653	18,490	20,415	21,947	10,745	77,250	28,924
Canadian dollar	6,937	17,429	21,465	14,527	17,330	77,688	21,432
Swiss franc	2,810	10,264	8,513	11,291	6,343	39,221	18,365
Australian dollar	2,100	7,559	9,852	10,915	5,434	35,860	24,140
Argentine peso	225	258	61	139	296	979	154
Brazilian real	2,639	4,019	650	1,222	2,611	11,141	1,680
Chilean peso	485	525	90	430	488	2,018	345
Mexican peso	3,598	7,283	6,705	2,670	8,854	29,110	6,048
All other currencies	8,298	17,639	8,930	12,775	12,323	59,965	21,387
EURO VERSUS							
Japanese yen	3,461	17,286	6,983	18,179	5,041	50,950	39,198
British pound	1,148	4,105	4,135	6,842	1,794	18,024	9,835
Swiss franc	1,357	4,800	3,268	9,004	2,530	20,959	9,677
ALL OTHER CURRENCY PAIRS	3,087	8,784	4,980	12,242	4,218	33,311	47,183
Total[a]	**72,681**	**259,009**	**184,517**	**232,625**	**143,371**	**892,203**	**424,509**

2f. AVERAGE DAILY VOLUME, by Execution Method, Instrument, and Counterparty, October 2008

Columns 1-6 in Millions of U.S. Dollars

	Execution Method						
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
INSTRUMENT							
Spot transactions	35,052	156,199	123,886	171,994	60,526	547,657	385,658
Outright forwards	9,294	44,589	7,771	32,146	16,034	109,834	31,081
Foreign exchange swaps	18,205	40,500	48,727	27,526	59,468	194,426	5,692
OTC foreign exchange options	10,130	17,721	4,132	957	7,343	40,283	2,079
Total[a]	**72,681**	**259,009**	**184,516**	**232,623**	**143,371**	**892,200**	**424,510**
COUNTERPARTY							
Reporting dealers	72,681	0	91,513	45,562	51,358	261,114	98,907
Banks/other dealers	0	144,564	85,880	72,630	63,028	366,102	213,874
Other financial customers	0	85,212	5,744	107,603	24,920	223,479	96,974
Nonfinancial customers	0	29,233	1,379	6,829	4,066	41,507	14,755
Total[a]	**72,681**	**259,009**	**184,516**	**232,624**	**143,372**	**892,202**	**424,510**

Note: The amounts reported in the tables are averaged over twenty-three trading days in October and are not adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

3a. SPOT TRANSACTIONS, Total Monthly Volume, October 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	600,725	2,119,205	969,471	105,251	3,794,652
Japanese yen	338,671	1,093,777	428,901	39,683	1,901,032
British pound	149,921	434,248	258,364	38,235	880,768
Canadian dollar	123,248	265,998	137,114	42,082	568,442
Swiss franc	75,510	240,608	132,332	8,778	457,228
Australian dollar	73,559	201,353	129,525	11,597	416,034
Argentine peso	1,870	2,378	2,488	483	7,219
Brazilian real	13,643	17,813	14,905	2,766	49,127
Chilean peso	2,986	7,541	3,052	166	13,745
Mexican peso	59,672	120,652	38,885	9,246	228,455
All other currencies	73,627	156,515	189,704	33,261	453,107
EURO VERSUS					
Japanese yen	118,857	573,920	254,704	15,193	962,674
British pound	39,574	171,923	75,460	8,746	295,703
Swiss franc	43,305	182,090	126,839	5,193	357,427
ALL OTHER CURRENCY PAIRS	62,275	235,935	118,794	16,230	433,234
Total[a]	**1,777,443**	**5,823,956**	**2,880,538**	**336,910**	**10,818,847**

3b. OUTRIGHT FORWARDS, Total Monthly Volume, October 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	40,545	110,482	380,514	104,209	635,750
Japanese yen	23,068	64,293	181,204	31,870	300,435
British pound	16,764	40,462	150,698	25,385	233,309
Canadian dollar	9,472	24,939	91,005	36,672	162,088
Swiss franc	7,185	15,805	47,173	12,748	82,911
Australian dollar	7,976	29,751	66,571	11,273	115,571
Argentine peso	3,398	1,988	1,536	1,082	8,004
Brazilian real	29,899	27,429	46,223	4,333	107,884
Chilean peso	7,951	7,405	2,081	463	17,900
Mexican peso	7,541	14,018	22,333	9,662	53,554
All other currencies	62,123	68,982	196,529	32,201	359,835
EURO VERSUS					
Japanese yen	4,775	15,417	16,824	3,391	40,407
British pound	1,457	11,353	14,110	3,339	30,259
Swiss franc	3,768	11,376	19,614	1,864	36,622
ALL OTHER CURRENCY PAIRS	8,044	21,741	65,398	12,682	107,865
Total[a]	**233,966**	**465,441**	**1,301,813**	**291,174**	**2,292,394**

Note: The tables report notional amounts of total monthly volume adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

3c. FOREIGN EXCHANGE SWAPS, Total Monthly Volume, October 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Counterparty: Other Dealers	Counterparty: Other Financial Customers	Counterparty: Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	170,937	567,460	255,895	55,585	1,049,877
Japanese yen	175,565	259,857	109,737	15,313	560,472
British pound	59,396	196,527	111,312	17,864	385,099
Canadian dollar	181,003	360,782	100,184	38,572	680,541
Swiss franc	44,396	136,096	27,609	3,646	211,747
Australian dollar	25,128	93,032	36,781	5,668	160,609
Argentine peso	166	152	121	0	439
Brazilian real	2,132	536	1,198	95	3,961
Chilean peso	414	1,212	272	6	1,904
Mexican peso	62,188	113,954	31,062	5,223	212,427
All other currencies	63,709	154,388	60,027	10,694	288,818
EURO VERSUS					
Japanese yen	1,180	2,801	6,643	911	11,535
British pound	1,373	5,035	5,860	5,336	17,604
Swiss franc	905	2,211	3,354	2,263	8,733
ALL OTHER CURRENCY PAIRS	4,131	40,077	33,034	8,337	85,579
Total[a]	**792,623**	**1,934,120**	**783,089**	**169,513**	**3,679,345**

3d. OTC FOREIGN EXCHANGE OPTIONS, Total Monthly Volume, October 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Counterparty: Other Dealers	Counterparty: Other Financial Customers	Counterparty: Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	66,697	54,298	48,683	31,296	200,974
Japanese yen	26,513	37,688	29,519	42,176	135,896
British pound	11,638	8,597	8,051	11,619	39,905
Canadian dollar	12,820	21,986	5,671	8,778	49,255
Swiss franc	5,941	4,318	2,659	4,273	17,191
Australian dollar	3,210	2,854	9,188	7,475	22,727
Argentine peso	586	139	79	27	831
Brazilian real	11,054	9,683	11,767	6,043	38,547
Chilean peso	392	473	31	236	1,132
Mexican peso	8,444	13,977	11,461	3,407	37,289
All other currencies	15,404	10,624	13,529	23,094	62,651
EURO VERSUS					
Japanese yen	5,038	5,763	9,256	7,387	27,444
British pound	7,515	6,232	6,074	1,267	21,088
Swiss franc	7,748	6,398	5,786	3,686	23,618
ALL OTHER CURRENCY PAIRS	16,082	13,771	12,822	6,307	48,982
Total[a]	**199,082**	**196,801**	**174,576**	**157,071**	**727,530**

Note: The tables report notional amounts of total monthly volume adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

3e. TOTAL MONTHLY VOLUME, by Execution Method and Currency Pair, October 2008

Columns 1-6 in Millions of U.S. Dollars

Currency Pair	Execution Method: Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
U.S. DOLLAR VERSUS							
Euro	451,438	2,127,701	1,364,538	1,673,692	942,734	6,560,103	2,552,989
Japanese yen	258,872	1,105,356	670,262	866,469	560,641	3,461,600	1,958,242
British pound	130,015	425,274	469,551	504,789	247,126	1,776,755	665,259
Canadian dollar	159,540	400,878	493,697	334,121	398,580	1,786,816	492,934
Swiss franc	64,640	236,061	195,789	259,688	145,886	902,064	422,403
Australian dollar	48,290	173,861	226,596	251,038	124,992	824,777	555,222
Argentine peso	5,170	5,926	1,397	3,191	6,809	22,493	3,547
Brazilian real	60,700	92,430	14,944	28,098	60,048	256,220	38,646
Chilean peso	11,158	12,066	2,061	9,887	11,235	46,407	7,930
Mexican peso	82,763	167,519	154,204	61,410	203,641	669,537	139,107
All other currencies	190,864	405,701	205,385	293,833	283,433	1,379,216	491,891
EURO VERSUS							
Japanese yen	79,611	397,588	160,620	418,119	115,932	1,171,870	901,545
British pound	26,397	94,412	95,103	157,357	41,270	414,539	226,216
Swiss franc	31,221	110,403	75,173	207,091	58,194	482,082	222,575
ALL OTHER CURRENCY PAIRS	70,993	202,028	114,550	281,555	97,017	766,143	1,085,216
Total[a]	**1,671,672**	**5,957,204**	**4,243,870**	**5,350,338**	**3,297,538**	**20,520,622**	**9,763,722**

3f. TOTAL MONTHLY VOLUME, by Execution Method, Instrument, and Counterparty, October 2008

Columns 1-6 in Millions of U.S. Dollars

	Execution Method: Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
INSTRUMENT							
Spot transactions	806,194	3,592,567	2,849,387	3,955,873	1,392,087	12,596,108	8,870,134
Outright forwards	213,765	1,025,550	178,731	739,352	368,792	2,526,190	714,856
Foreign exchange swaps	418,717	931,501	1,120,722	633,109	1,367,761	4,471,810	130,911
OTC foreign exchange options	232,992	407,584	95,032	22,009	168,894	926,511	47,821
Total[a]	**1,671,668**	**5,957,202**	**4,243,872**	**5,350,343**	**3,297,534**	**20,520,619**	**9,763,722**
COUNTERPARTY							
Reporting dealers	1,671,666	0	2,104,796	1,047,930	1,181,232	6,005,624	2,274,855
Banks/other dealers	0	3,324,966	1,975,232	1,670,483	1,449,633	8,420,314	4,919,099
Other financial customers	0	1,959,882	132,122	2,474,864	573,149	5,140,017	2,230,405
Nonfinancial customers	0	672,358	31,723	157,067	93,518	954,666	339,363
Total[a]	**1,671,666**	**5,957,206**	**4,243,873**	**5,350,344**	**3,297,532**	**20,520,621**	**9,763,722**

Note: The amounts reported in the tables are not adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

4a. OUTRIGHT FORWARDS, Total Monthly Volume by Maturity, October 2008

Millions of U.S. Dollars

Currency Pair	Maturity: Up to One Month	One Month to One Year	More Than One Year
U.S. DOLLAR VERSUS			
Euro	373,435	294,575	8,271
Japanese yen	182,994	136,921	3,574
British pound	127,470	120,687	1,905
Canadian dollar	102,320	64,622	4,606
Swiss franc	48,339	41,342	405
Australian dollar	72,212	50,204	1,121
Argentine peso	7,245	3,898	248
Brazilian real	99,560	34,769	3,445
Chilean peso	16,318	9,346	181
Mexican peso	24,298	35,438	1,353
All other currencies	179,346	232,768	9,829
EURO VERSUS			
Japanese yen	29,055	15,172	949
British pound	22,004	9,420	283
Swiss franc	28,357	11,064	957
ALL OTHER CURRENCY PAIRS	59,810	55,060	1,024
Total[a]	**1,372,763**	**1,115,286**	**38,151**

4b. FOREIGN EXCHANGE SWAPS, Total Monthly Volume by Maturity, October 2008

Millions of U.S. Dollars

Currency Pair	Maturity: Up to One Month	One Month to One Year	More Than One Year
U.S. DOLLAR VERSUS			
Euro	762,919	416,718	41,161
Japanese yen	494,629	228,988	12,405
British pound	302,829	134,487	7,164
Canadian dollar	701,456	149,967	10,103
Swiss franc	168,960	84,633	2,539
Australian dollar	141,087	43,018	1,623
Argentine peso	419	183	0
Brazilian real	5,930	160	2
Chilean peso	1,263	1,014	39
Mexican peso	218,481	50,554	5,569
All other currencies	255,078	92,238	5,195
EURO VERSUS			
Japanese yen	9,553	2,766	387
British pound	11,863	6,790	314
Swiss franc	6,916	2,634	81
ALL OTHER CURRENCY PAIRS	62,471	26,291	936
Total[a]	**3,143,854**	**1,240,441**	**87,518**

Note: The tables report notional amounts of total monthly volume that are not adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

4c. OTC FOREIGN EXCHANGE OPTIONS, Total Monthly Volume by Maturity, October 2008

Millions of U.S. Dollars

Currency Pair	Maturity: Up to One Month	One to Six Months	More Than Six Months
U.S. DOLLAR VERSUS			
Euro	63,993	154,251	49,415
Japanese yen	30,030	65,159	67,213
British pound	16,034	26,389	9,112
Canadian dollar	13,174	34,878	14,012
Swiss franc	7,914	8,963	6,247
Australian dollar	2,736	17,382	5,816
Argentine peso	538	654	221
Brazilian real	9,216	26,970	13,408
Chilean peso	494	697	330
Mexican peso	6,080	26,859	12,788
All other currencies	12,935	44,674	20,437
EURO VERSUS			
Japanese yen	11,383	14,350	6,743
British pound	12,380	12,844	3,374
Swiss franc	11,416	14,251	5,692
ALL OTHER CURRENCY PAIRS	12,502	35,973	16,577
Total[a]	**210,825**	**484,294**	**231,385**

Note: The table reports notional amounts of total monthly volume that are not adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

1. TOTAL FOREIGN EXCHANGE VOLUME, April 2008

Millions of U.S. Dollars

AVERAGE DAILY VOLUME

Instrument	Current Amount Reported	Dollar Change over Previous Year	Percentage Change over Previous Year
Spot transactions	393,261	119,300	43.5
Outright forwards	93,174	-7,905	-7.8
Foreign exchange swaps	194,139	4,792	2.5
OTC foreign exchange options	34,387	-19,414	-36.1
Total	**714,961**	**96,773**	**15.7**

TOTAL MONTHLY VOLUME

Instrument	Current Amount Reported	Dollar Change over Previous Year	Percentage Change over Previous Year
Spot transactions	8,651,692	2,898,575	50.4
Outright forwards	2,049,809	-72,858	-3.4
Foreign exchange swaps	4,271,021	294,765	7.4
OTC foreign exchange options	756,488	-373,387	-33.0
Total	**15,729,010**	**2,747,095**	**21.2**

Note: The lower table reports notional amounts of total monthly volume adjusted for double reporting of trades between reporting dealers; there were twenty-one trading days in April 2007 and twenty-two in April 2008.

2a. SPOT TRANSACTIONS, Average Daily Volume, April 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	19,426	69,325	37,405	5,321	131,477
Japanese yen	10,026	30,626	17,177	1,899	59,728
British pound	5,160	18,352	17,226	1,294	42,032
Canadian dollar	3,907	8,962	5,220	1,536	19,625
Swiss franc	3,418	12,583	8,450	445	24,896
Australian dollar	2,207	7,843	6,703	372	17,125
Argentine peso	46	57	90	21	214
Brazilian real	345	675	737	237	1,994
Chilean peso	273	440	328	47	1,088
Mexican peso	2,383	4,959	2,168	580	10,090
All other currencies	3,095	6,759	7,473	1,507	18,834
EURO VERSUS					
Japanese yen	2,725	12,701	8,818	571	24,815
British pound	1,449	5,875	3,768	379	11,471
Swiss franc	1,569	7,876	5,404	311	15,160
ALL OTHER CURRENCY PAIRS	2,158	6,489	4,705	1,360	14,712
Total[a]	**58,187**	**193,522**	**125,672**	**15,880**	**393,261**

2b. OUTRIGHT FORWARDS, Average Daily Volume, April 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	1,673	3,366	11,810	3,806	20,655
Japanese yen	624	1,221	5,116	1,170	8,131
British pound	517	1,155	8,153	1,322	11,147
Canadian dollar	322	711	3,548	1,284	5,865
Swiss franc	385	474	2,007	382	3,248
Australian dollar	351	852	2,814	357	4,374
Argentine peso	110	172	83	23	388
Brazilian real	1,741	2,225	3,287	395	7,648
Chilean peso	452	685	278	69	1,484
Mexican peso	365	688	1,033	312	2,398
All other currencies	3,491	4,539	8,852	1,493	18,375
EURO VERSUS					
Japanese yen	230	688	1,138	180	2,236
British pound	57	424	730	273	1,484
Swiss franc	39	163	328	120	650
ALL OTHER CURRENCY PAIRS	326	959	3,016	790	5,091
Total[a]	**10,683**	**18,322**	**52,193**	**11,976**	**93,174**

Notes: The tables report notional amounts of average daily volume adjusted for double reporting of trades between reporting dealers. The amounts are averaged over twenty-two trading days in April.

[a]Figures may not sum to totals because of rounding.

2c. FOREIGN EXCHANGE SWAPS, Average Daily Volume, April 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	7,781	21,884	11,983	4,121	45,769
Japanese yen	5,483	10,593	4,404	1,060	21,540
British pound	5,150	16,832	7,478	1,568	31,028
Canadian dollar	9,389	14,316	4,231	1,824	29,760
Swiss franc	2,223	6,237	2,105	725	11,290
Australian dollar	1,773	7,368	3,174	476	12,791
Argentine peso	6	5	3	0	14
Brazilian real	44	52	122	22	240
Chilean peso	23	33	9	1	66
Mexican peso	2,999	5,865	2,885	935	12,684
All other currencies	3,198	9,077	5,653	2,612	20,540
EURO VERSUS					
Japanese yen	34	63	345	158	600
British pound	52	320	571	450	1,393
Swiss franc	14	73	115	84	286
ALL OTHER CURRENCY PAIRS	123	924	2,532	2,559	6,138
Total[a]	**38,292**	**93,642**	**45,610**	**16,595**	**194,139**

2d. OTC FOREIGN EXCHANGE OPTIONS, Average Daily Volume, April 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	1,531	2,015	1,771	1,301	6,618
Japanese yen	1,738	1,977	1,449	862	6,026
British pound	368	495	504	389	1,756
Canadian dollar	423	784	364	226	1,797
Swiss franc	414	514	457	107	1,492
Australian dollar	343	304	305	113	1,065
Argentine peso	5	2	7	2	16
Brazilian real	235	510	807	79	1,631
Chilean peso	22	25	16	11	74
Mexican peso	544	693	845	183	2,265
All other currencies	493	711	1,381	1,363	3,948
EURO VERSUS					
Japanese yen	405	827	487	99	1,818
British pound	239	366	238	148	991
Swiss franc	277	549	227	36	1,089
ALL OTHER CURRENCY PAIRS	736	1,433	1,316	316	3,801
Total[a]	**7,773**	**11,205**	**10,174**	**5,235**	**34,387**

Notes: The tables report notional amounts of average daily volume adjusted for double reporting of trades between reporting dealers. The amounts are averaged over twenty-two trading days in April.

[a]Figures may not sum to totals because of rounding.

2e. AVERAGE DAILY VOLUME, by Execution Method and Currency Pair, April 2008

Columns 1-6 in Millions of U.S. Dollars

Currency Pair	Execution Method: Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
U.S. DOLLAR VERSUS							
Euro	16,321	70,293	53,598	52,367	42,348	234,927	65,672
Japanese yen	11,409	36,317	25,343	20,679	19,542	113,290	48,211
British pound	5,015	17,852	28,344	25,730	20,213	97,154	22,924
Canadian dollar	8,039	14,011	20,547	11,736	16,755	71,088	15,728
Swiss franc	3,761	16,219	9,753	10,295	7,335	47,363	18,424
Australian dollar	2,518	8,974	9,782	11,582	7,171	40,027	15,418
Argentine peso	201	253	8	74	260	796	110
Brazilian real	1,967	4,253	445	1,781	5,431	13,877	1,506
Chilean peso	517	819	29	525	1,592	3,482	393
Mexican peso	3,580	9,386	7,006	2,293	11,460	33,725	4,705
All other currencies	9,979	23,493	9,115	14,204	15,179	71,970	18,957
EURO VERSUS							
Japanese yen	2,047	11,871	5,562	9,552	3,829	32,861	16,679
British pound	987	2,966	4,858	6,841	1,481	17,133	6,619
Swiss franc	857	5,640	3,208	6,807	2,570	19,082	7,104
ALL OTHER CURRENCY PAIRS	2,876	10,112	3,885	9,659	6,548	33,080	23,327
Total[a]	**70,074**	**232,459**	**181,483**	**184,125**	**161,714**	**829,855**	**265,777**

2f. AVERAGE DAILY VOLUME, by Execution Method, Instrument, and Counterparty, April 2008

Columns 1-6 in Millions of U.S. Dollars

	Execution Method: Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
INSTRUMENT							
Spot transactions	26,357	120,891	117,171	134,467	52,550	451,436	233,549
Outright forwards	10,527	34,107	8,290	26,362	24,561	103,847	24,805
Foreign exchange swaps	23,759	56,533	52,538	22,766	76,825	232,421	5,370
OTC foreign exchange options	9,432	20,926	3,485	531	7,779	42,153	2,051
Total[a]	**70,075**	**232,457**	**181,484**	**184,126**	**161,715**	**829,857**	**265,775**
COUNTERPARTY							
Reporting dealers	70,075	0	76,382	26,856	56,521	229,834	54,466
Banks/other dealers	0	97,284	89,120	60,517	69,765	316,686	121,362
Other financial customers	0	106,394	10,772	86,946	29,539	233,651	74,870
Nonfinancial customers	0	28,780	5,209	9,807	5,890	49,686	15,077
Total[a]	**70,075**	**232,458**	**181,483**	**184,126**	**161,715**	**829,857**	**265,775**

Note: The amounts reported in the tables are averaged over twenty-two trading days in April and are not adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

3a. SPOT TRANSACTIONS, Total Monthly Volume, April 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Counterparty: Other Dealers	Counterparty: Other Financial Customers	Counterparty: Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	427,381	1,525,149	822,916	117,058	2,892,504
Japanese yen	220,563	673,762	377,900	41,774	1,313,999
British pound	113,514	403,735	378,981	28,462	924,692
Canadian dollar	85,945	197,173	114,840	33,797	431,755
Swiss franc	75,196	276,825	185,889	9,798	547,708
Australian dollar	48,555	172,546	147,468	8,195	376,764
Argentine peso	1,002	1,263	1,981	460	4,706
Brazilian real	7,588	14,851	16,221	5,214	43,874
Chilean peso	6,002	9,682	7,227	1,024	23,935
Mexican peso	52,431	109,095	47,692	12,752	221,970
All other currencies	68,099	148,691	164,401	33,153	414,344
EURO VERSUS					
Japanese yen	59,947	279,418	193,993	12,572	545,930
British pound	31,871	129,251	82,900	8,328	252,350
Swiss franc	34,522	173,261	118,884	6,844	333,511
ALL OTHER CURRENCY PAIRS	47,482	142,750	103,506	29,912	323,650
Total[a]	**1,280,098**	**4,257,452**	**2,764,799**	**349,343**	**8,651,692**

3b. OUTRIGHT FORWARDS, Total Monthly Volume, April 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Counterparty: Other Dealers	Counterparty: Other Financial Customers	Counterparty: Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	36,799	74,043	259,829	83,736	454,407
Japanese yen	13,723	26,859	112,550	25,736	178,868
British pound	11,374	25,420	179,360	29,086	245,240
Canadian dollar	7,082	15,649	78,061	28,240	129,032
Swiss franc	8,468	10,429	44,156	8,409	71,462
Australian dollar	7,721	18,744	61,910	7,853	96,228
Argentine peso	2,411	3,781	1,826	508	8,526
Brazilian real	38,292	48,954	72,324	8,688	168,258
Chilean peso	9,946	15,068	6,127	1,517	32,658
Mexican peso	8,028	15,130	22,733	6,869	52,760
All other currencies	76,795	99,848	194,742	32,856	404,241
EURO VERSUS					
Japanese yen	5,055	15,135	25,038	3,956	49,184
British pound	1,251	9,334	16,058	5,996	32,639
Swiss franc	865	3,591	7,210	2,649	14,315
ALL OTHER CURRENCY PAIRS	7,174	21,101	66,344	17,372	111,991
Total[a]	**234,984**	**403,086**	**1,148,268**	**263,471**	**2,049,809**

Note: The tables report notional amounts of total monthly volume adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

3c. FOREIGN EXCHANGE SWAPS, Total Monthly Volume, April 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	171,177	481,442	263,627	90,662	1,006,908
Japanese yen	120,622	233,044	96,884	23,316	473,866
British pound	113,296	370,293	164,518	34,502	682,609
Canadian dollar	206,567	314,954	93,090	40,139	654,750
Swiss franc	48,904	137,206	46,310	15,942	248,362
Australian dollar	39,005	162,107	69,836	10,469	281,417
Argentine peso	125	118	66	0	309
Brazilian real	975	1,135	2,681	486	5,277
Chilean peso	496	720	195	29	1,440
Mexican peso	65,970	129,036	63,464	20,570	279,040
All other currencies	70,350	199,686	124,369	57,475	451,880
EURO VERSUS					
Japanese yen	754	1,394	7,589	3,479	13,216
British pound	1,144	7,039	12,556	9,904	30,643
Swiss franc	316	1,602	2,524	1,850	6,292
ALL OTHER CURRENCY PAIRS	2,697	20,321	55,693	56,301	135,012
Total[a]	**842,398**	**2,060,097**	**1,003,402**	**365,124**	**4,271,021**

3d. OTC FOREIGN EXCHANGE OPTIONS, Total Monthly Volume, April 2008

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR VERSUS					
Euro	33,684	44,320	38,953	28,630	145,587
Japanese yen	38,240	43,488	31,878	18,963	132,569
British pound	8,090	10,899	11,096	8,550	38,635
Canadian dollar	9,296	17,251	8,018	4,974	39,539
Swiss franc	9,116	11,297	10,057	2,358	32,828
Australian dollar	7,548	6,689	6,719	2,480	23,436
Argentine peso	115	35	154	47	351
Brazilian real	5,169	11,231	17,745	1,736	35,881
Chilean peso	495	550	354	240	1,639
Mexican peso	11,972	15,242	18,580	4,023	49,817
All other currencies	10,845	15,641	30,378	29,984	86,848
EURO VERSUS					
Japanese yen	8,907	18,187	10,718	2,168	39,980
British pound	5,255	8,042	5,237	3,255	21,789
Swiss franc	6,087	12,079	5,001	796	23,963
ALL OTHER CURRENCY PAIRS	16,181	31,528	28,962	6,955	83,626
Total[a]	**171,000**	**246,479**	**223,850**	**115,159**	**756,488**

Note: The tables report notional amounts of total monthly volume adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

3e. TOTAL MONTHLY VOLUME, by Execution Method and Currency Pair, April 2008

Columns 1-6 in Millions of U.S. Dollars

Currency Pair	Execution Method: Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
U.S. DOLLAR VERSUS							
Euro	359,058	1,546,438	1,179,157	1,152,073	931,663	5,168,389	1,444,776
Japanese yen	250,998	798,965	557,555	454,945	429,932	2,492,395	1,060,632
British pound	110,330	392,750	623,575	566,049	444,695	2,137,399	504,321
Canadian dollar	176,849	308,237	452,035	258,193	368,600	1,563,914	346,013
Swiss franc	82,752	356,811	214,562	226,499	161,377	1,042,001	405,324
Australian dollar	55,406	197,430	215,198	254,815	157,769	880,618	339,202
Argentine peso	4,417	5,567	180	1,636	5,727	17,527	2,410
Brazilian real	43,284	93,573	9,788	39,178	119,475	305,298	33,132
Chilean peso	11,373	18,021	628	11,550	35,027	76,599	8,647
Mexican peso	78,761	206,496	154,128	50,447	252,124	741,956	103,502
All other currencies	219,544	516,838	200,536	312,492	333,934	1,583,344	417,046
EURO VERSUS							
Japanese yen	45,034	261,152	122,367	210,140	84,234	722,927	366,944
British pound	21,706	65,242	106,871	150,501	32,582	376,902	145,619
Swiss franc	18,864	124,090	70,574	149,760	56,545	419,833	156,282
ALL OTHER CURRENCY PAIRS	63,278	222,465	85,476	212,491	144,053	727,763	513,193
Total[a]	**1,541,654**	**5,114,075**	**3,992,630**	**4,050,769**	**3,557,737**	**18,256,865**	**5,847,043**

3f. TOTAL MONTHLY VOLUME, by Execution Method, Instrument, and Counterparty, April 2008

Columns 1-6 in Millions of U.S. Dollars

	Execution Method: Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
INSTRUMENT							
Spot transactions	579,864	2,659,603	2,577,760	2,958,272	1,156,108	9,931,607	5,138,072
Outright forwards	231,594	750,363	182,370	579,955	540,341	2,284,623	545,712
Foreign exchange swaps	522,704	1,243,730	1,155,844	500,858	1,690,142	5,113,278	118,134
OTC foreign exchange options	207,495	460,380	76,664	11,684	171,143	927,366	45,123
Total[a]	**1,541,657**	**5,114,076**	**3,992,638**	**4,050,769**	**3,557,734**	**18,256,874**	**5,847,041**
COUNTERPARTY							
Reporting dealers	1,541,657	0	1,680,395	590,830	1,243,464	5,056,346	1,198,246
Banks/other dealers	0	2,140,245	1,960,643	1,331,382	1,534,834	6,967,104	2,669,960
Other financial customers	0	2,340,669	236,992	1,912,809	649,854	5,140,324	1,647,146
Nonfinancial customers	0	633,157	114,608	215,748	129,583	1,093,096	331,690
Total[a]	**1,541,657**	**5,114,071**	**3,992,638**	**4,050,769**	**3,557,735**	**18,256,870**	**5,847,042**

Note: The amounts reported in the tables are not adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

4a. OUTRIGHT FORWARDS, Total Monthly Volume by Maturity, April 2008

Millions of U.S. Dollars

Currency Pair	Maturity: Up to One Month	One Month to One Year	More Than One Year
U.S. DOLLAR VERSUS			
Euro	238,136	246,522	6,531
Japanese yen	101,171	89,301	2,102
British pound	113,135	139,910	3,559
Canadian dollar	76,292	58,450	1,362
Swiss franc	34,558	44,628	732
Australian dollar	61,416	41,113	1,402
Argentine peso	4,194	6,238	495
Brazilian real	151,627	51,943	2,976
Chilean peso	22,448	19,438	710
Mexican peso	25,038	35,235	509
All other currencies	205,847	260,336	14,841
EURO VERSUS			
Japanese yen	34,092	18,591	1,538
British pound	20,788	12,861	229
Swiss franc	9,410	5,486	275
ALL OTHER CURRENCY PAIRS	58,007	55,780	5,363
Total[a]	**1,156,159**	**1,085,832**	**42,624**

4b. FOREIGN EXCHANGE SWAPS, Total Monthly Volume by Maturity, April 2008

Millions of U.S. Dollars

Currency Pair	Maturity: Up to One Month	One Month to One Year	More Than One Year
U.S. DOLLAR VERSUS			
Euro	851,234	316,023	10,815
Japanese yen	388,591	195,441	10,445
British pound	640,650	147,980	7,261
Canadian dollar	743,624	114,506	3,173
Swiss franc	226,621	69,666	968
Australian dollar	257,543	61,380	1,487
Argentine peso	322	110	0
Brazilian real	2,723	3,327	200
Chilean peso	1,272	442	221
Mexican peso	286,333	53,730	4,934
All other currencies	424,032	88,463	9,720
EURO VERSUS			
Japanese yen	9,543	4,415	5
British pound	19,059	12,655	71
Swiss franc	5,088	1,466	47
ALL OTHER CURRENCY PAIRS	115,279	22,115	306
Total[a]	**3,971,914**	**1,091,719**	**49,653**

Note: The tables report notional amounts of total monthly volume that are not adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

4c. OTC FOREIGN EXCHANGE OPTIONS, Total Monthly Volume by Maturity, April 2008

Millions of U.S. Dollars

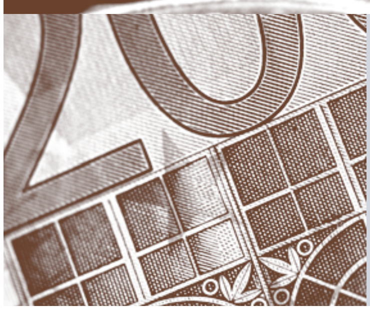
Currency Pair	Maturity: Up to One Month	Maturity: One to Six Months	Maturity: More Than Six Months
U.S. DOLLAR VERSUS			
Euro	66,598	79,926	32,736
Japanese yen	55,796	68,706	46,292
British pound	27,037	15,728	3,947
Canadian dollar	22,230	19,191	7,399
Swiss franc	20,989	17,328	3,620
Australian dollar	15,562	13,066	2,351
Argentine peso	0	341	122
Brazilian real	12,201	21,047	7,799
Chilean peso	482	1,509	141
Mexican peso	15,605	33,749	12,426
All other currencies	47,542	34,885	15,260
EURO VERSUS			
Japanese yen	17,394	18,098	13,387
British pound	13,140	10,454	3,444
Swiss franc	9,497	11,886	8,664
ALL OTHER CURRENCY PAIRS	29,888	53,325	16,586
Total[a]	**353,961**	**399,239**	**174,174**

Note: The table reports notional amounts of total monthly volume that are not adjusted for double reporting of trades between reporting dealers.

[a]Figures may not sum to totals because of rounding.

The Foreign Exchange Committee

2008 Annual Report



Reference Material

Document of Organization

The Foreign Exchange Committee is an industry group that has provided guidance and leadership to the global foreign exchange market since the Committee's founding in 1978. The Committee is sponsored by, but independent of, the Federal Reserve Bank of New York. The Federal Reserve Bank of New York views the Committee as an advisory group that provides insight on market conditions, identifies market-related problems, and suggests solutions or next steps.

Committee Objectives

The Foreign Exchange Committee's objectives are:

- to provide a forum for discussing issues in the foreign exchange and related international financial markets;
- to serve as a channel of communication between these markets and the Federal Reserve System and, where appropriate, other official institutions in the United States and abroad;
- to enhance knowledge and understanding of the foreign exchange and related international financial markets, in practice and in theory;
- to foster improvements in the quality of risk management in these markets;
- to develop recommendations and prepare papers on market issues and practices with a view toward improving the functioning of the foreign exchange markets; and
- to work with the other organizations representing participants in related financial markets.

Committee Composition

The Committee strives to ensure fair presentation and consideration of all points of view and interests in the market at all times. The composition of the Committee can include New York–headquartered banks, other U.S.–headquartered banks, foreign banks, dealers, foreign exchange brokerage firms, other financial entities that transact in the foreign exchange market, and the Federal Reserve Bank of New York (ex officio). In general:

- The Committee consists of no more than thirty members.
- Institutions participating in the Committee are chosen in consideration of: a) their participation in the foreign exchange market and b) their importance. Selection of participants remains flexible to reflect changes as they occur in the foreign exchange market.
- Members are chosen with regard to their firm, their job responsibilities within that firm, their market stature, and their ongoing role in the market. Members should have a broad knowledge of the foreign exchange market and should be in a position to speak for their respective institutions.
- The membership term is four calendar years. A member may be renominated for additional terms; however, an effort will be made to maximize participation in the Committee by institutions eligible for membership. The normal term of the Committee's Chair, who will not be a Federal Reserve Bank of New York official, is no more than three years.
- Responsibility for choosing member institutions rests with the Federal Reserve Bank of New York. The Membership Subcommittee, chaired by a Federal Reserve Bank official, advises the Federal Reserve on membership issues.

Committee Procedures

Meetings:

- The Committee will meet at least six times per year. The meetings will follow a specified agenda; however, the format of the discussions will be informal. In addition to regularly scheduled meetings, a meeting of the Committee may be requested at any time by five or more members.

- Members are expected to attend all meetings in person. Alternates cannot be sent.
- Meetings of the Committee will be held either at the Federal Reserve Bank of New York or at other member institutions. Meetings may be held elsewhere, as agreed by the Committee.

Input from Buy-Side Firms:

- A Buy-Side Subcommittee was established in 2008 to provide a forum for discussing matters of mutual concern to dealers and nondealers in the foreign exchange market. This group is intended to broaden the dialogue on foreign exchange and supplementary best practice efforts conducted under the sponsorship of the Foreign Exchange Committee.
- The Buy-Side Subcommittee is composed of selected members of the Foreign Exchange Committee and selected members representing nondealer firms active in the foreign exchange market.
- The Buy-Side Subcommittee meets roughly four times per year.

Working Groups:

- Standing working groups may include an Operations Managers Working Group and a Chief Dealers Working Group. These groups will be composed of market participants with an interest and expertise in projects assigned by the Committee, but membership decisions rest with the Federal Reserve Bank of New York.
- Committee members will be designated as working group liaisons. The liaison's role is primarily one of providing guidance to the working group members and fostering effective communication between the working group and the Committee. In addition, a representative of the Federal Reserve Bank of New York will be assigned as an advisor to each working group.
- The Committee may designate additional ad hoc or standing 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 working groups or in discussions and deliberations.

Recommendations and Publications:

- Any recommendation the Committee wishes to make on market-related topics will be discussed and decided upon by the Committee. Any recommendation or issue paper agreed to by the Committee will be distributed not only to member institutions, but also to institutions that participate in the foreign exchange market via the Committee's website or other means.
- The Committee will also publish an annual report, which will be made available on the Foreign Exchange Committee's website <http://www.newyorkfed.org/fxc/>.

Membership Responsibilities

The Foreign Exchange Committee is composed of individuals from institutions that participate actively in the foreign exchange market as well as other financial markets worldwide. As senior officers of such institutions, Committee members have achieved stature in their own organizations and the marketplace, and have acquired expertise that is invaluable to attaining the Committee's objectives. In joining the Committee, these individuals expand their focus beyond their own institutions to encompass the entire market.

A member's ongoing communication with the markets worldwide generates information that is necessary to the Committee's deliberations on market issues or problems. Each member must be an effective communicator and problem solver with a commitment to raise and, when possible, resolve market and industry issues. Effective individual participation is critical for the collective effort to succeed.

The responsibilities of membership apply equally to all Committee members and are:

- to attend all meetings in person;
- 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 present the concerns of his or her own institution to the Committee; in addition, to reflect the concerns of a market professional as well as the constituency from which his or her institution is drawn or the professional organization on which he or she serves; and
- to participate in Committee work and to volunteer the resources of his or her institution to support the Committee's projects and general needs.

Membership Subcommittee

The Membership Subcommittee manages the organization of the Committee by selecting new members, assigning duties, assessing the participation of the current membership, and changing, if needed, the composition of the Committee. The Federal Reserve Bank of New York representative on the Committee chairs the Membership Subcommittee. Subcommittee members (see next page for 2008 and 2009 membership) include the Committee's Chair as well as several long-standing and respected members of the Committee.

Much of the subcommittee's work occurs during October and November as the Committee prepares for the upcoming year. In its first conference call, the subcommittee:

- reviews the current Committee membership, taking account of meeting attendance and project participation over the past year;
- notes members whose four-year terms expire at year-end; and
- lists members who resigned or intend to resign prior to the end of their term because of developments at their institution, such as retirement, resignation, reassignment, or merger activity.

In planning for the new year and considering new individuals for membership, the Committee may reduce or increase its size while recognizing that the Document of Organization caps the number of members at thirty.

Members whose terms are expiring may be invited to renew for an additional four-year term. The Committee's core group of long-standing members, whose terms have been renewed several times, benefits the entire group by providing a consistency of objectives and an enhanced knowledge of the Committee's history. Members who have been unable to meet the expectations for attendance and project participation may be asked to either step down or recommend others in their organization who might provide the Committee with more active and consistent support.

When discussing new members, the subcommittee considers each candidate's caliber, position, and recognition in the marketplace, as well as the degree of importance the candidate's institution has in the foreign exchange market. The subcommittee considers individuals who have contacted the Committee directly. In addition, members of the Committee, of the subcommittee, or other market participants may nominate an individual who they feel will benefit the Committee's mission.

The subcommittee also considers the institutional composition of the Committee in its membership decisions on the theory that membership should reflect the overall composition of the actual market. During 2009, the Committee's membership will include individuals from commercial and investment banks and from interdealer brokers.

Finally, the subcommittee designates appropriate members to function as liaisons to facilitate communication between the Committee and its existing working groups. The liaisons for 2008 and 2009 for the two existing working groups are identified below.

Foreign Exchange Committee Member Assignments, 2008 and 2009

2008

Committee Chair
Richard Mahoney

Liaisons for Working Groups
Chief Dealers
Russell LaScala
Jamie Thorsen

Operations Managers
Robert Catalanello
Peter Connolly

Membership Subcommittee
William Dudley (Chair)
Jeff Feig
Richard Mahoney
Jamie Thorsen

Risk Management and Compliance Subcommittee
Peter Connolly
Jamie Thorsen

2009

Committee Chair
Richard Mahoney

Liaisons for Working Groups
Chief Dealers
Russell LaScala
Jamie Thorsen

Operations Managers
Robert Catalanello
Peter Connolly

Membership Subcommittee
Jeff Feig
Richard Mahoney
Patricia Mosser (Chair)
Jamie Thorsen

Risk Management and Compliance Subcommittee
Peter Connolly
Jamie Thorsen

Meetings, 2008 and 2009

The Foreign Exchange Committee meets approximately eight times a year. Of the eight meetings, about half are luncheons while the others consist of two-hour late-afternoon sessions followed by a reception or dinner. The Chair, working with the executive assistant and other representatives from the Committee's sponsor, the Federal Reserve Bank of New York, is responsible for the agenda. In preparing for the meetings, the Chair solicits advice from Committee members and receives updates from members who interact with the Operations Managers Working Group and Chief Dealers Working Group.

The meetings are action-oriented rather than information-based. Each meeting opens with a discussion and analysis of market conditions. The Chair often asks members specific questions and requests feedback, comments, or advice. During the markets development portion of the meeting, the discussions not only provide important information and guidance for the Committee's sponsor, but often plant the seeds for future projects and initiatives. A review of specific industry developments, including legal matters, follows this part of the meeting.

In the second half of each meeting, the members address specific projects or initiatives of the Committee and its associated working groups. The individual members who sponsor the Committee's projects lead the discussion, with the objective of obtaining approval of next or final steps.

2008	**2009**
January 10	January 8
February 7	February 5
March 13	March 12
May 8	May 7
June 5	June 11
September 4	September 10
October 2	October 8
November 6	November 5

Member List, 2008

Shigeru Asai
General Manager and Treasurer
Bank of Tokyo-Mitsubishi UFJ

Anthony Bisegna
Senior Managing Director
State Street Global Markets

Graham Broyd
Managing Director
Royal Bank of Scotland

David Castle
Managing Director
Standard Chartered Bank

Robert Catalanello
Managing Director
Calyon

Peter Connolly
Executive Vice President
Wells Fargo

Jeff Feig
Managing Director
Citigroup

Rodolfo Fischer
Executive Vice President
Banco Itau S.A.

Susan Gammage
Executive Vice President
Thomson Reuters

Richard Gladwin
Managing Director
Lehman Brothers

Russell LaScala
Managing Director
Deutsche Bank

Michael Leibowitz
Chief Executive Officer
Tradition Financial Services

Richard Mahoney
Executive Vice President
BNY Mellon

Frank Manganella
Principal
Handelsbanken

Stephen Mettler
Managing Director
Morgan Stanley & Co.

John Meyer
Global Head of FX Derivatives
UBS

John Nixon
Executive Director
ICAP North America

Daniel O'Sullivan
Managing Director
Unicredit, Bayerische Hypo- und Vereinsbank AG

Susan Storey
Managing Director
CIBC World Markets

Jamie Thorsen
Executive Managing Director
Bank of Montreal

Peter Tomozawa
Managing Director
Goldman Sachs & Co.

Christopher Willcox
Global Head of Rates Trading
JP Morgan Chase

Buy-Side Subcommittee

Adnan Akant
Managing Director
Fischer Francis Trees & Watts

Anthony Bisegna
Senior Managing Director
State Street Global Markets

Mark Brown
Managing Director
Tudor Investment Corporation

Graham Broyd
Managing Director
Royal Bank of Scotland

Eric Busay
Portfolio Manager Global Fixed Income and Currency
CalPERS Investments

David Castle
Managing Director
Standard Chartered Bank

Jeff Feig
Managing Director
Citigroup

Michael Leibowitz
Chief Executive Officer
Tradition Financial Services

Giulio Martini
Chief Investment Officer–Currency Strategies
AllianceBernstein

John Meyer
Global Head of FX Derivatives
UBS

John Nixon
Executive Director
ICAP North America

Mike Novogratz
Director and President
Fortress Investment Group LLC

Karen Parker Feld
Principal and Chief Investment Officer
Artemis Financial Advisors LLC

David Rusate
Managing Director–Foreign Exchange
and Commodities
General Electric Company

Federal Reserve Bank of New York (Ex Officio)

Mari Baca
Foreign Exchange Committee Secretariat
Federal Reserve Bank of New York

William Dudley
Executive Vice President
Federal Reserve Bank of New York

Patricia Mosser
Senior Vice President
Federal Reserve Bank of New York

Counsel

Michael Nelson
Counsel and Vice President
Federal Reserve Bank of New York

Member List, 2009

Anthony Bisegna
Senior Managing Director
State Street Global Markets

Graham Broyd
Managing Director
Royal Bank of Scotland

David Castle
Managing Director
Standard Chartered Bank

Robert Catalanello
Managing Director
Calyon

Peter Connolly
Executive Vice President
Wells Fargo

Jeff Feig
Managing Director
Citigroup

Rodolfo Fischer
Executive Vice President
Banco Itau S.A.

Susan Gammage
Executive Vice President
Thomson Reuters

William Hirschberg
Managing Director
Barclays Capital

Moti Jungreis
Managing Director
TD Securities

Russell LaScala
Managing Director
Deutsche Bank

Michael Leibowitz
Chief Executive Officer
Tradition Financial Services

Richard Mahoney
Executive Vice President
BNY Mellon

Stephen Mettler
Managing Director
Morgan Stanley & Co.

John Nixon
Executive Director
ICAP North America

Troy Rohrbaugh
Managing Director
JP Morgan Chase

Fabian Shey
Managing Director
UBS

Jamie Thorsen
Executive Managing Director
Bank of Montreal

Peter Tomozawa
Managing Director
Goldman Sachs & Co.

Christopher Vogel
Managing Director
Bank of America

Steven Yanez
Managing Director
Credit Suisse

Masamichi Yasuda
General Manager and Treasurer
Bank of Tokyo-Mitsubishi UFJ

Buy-Side Subcommittee

Adnan Akant
Managing Director
Fischer Francis Trees & Watts

Anthony Bisegna
Senior Managing Director
State Street Global Markets

Mark Brown
Managing Director
Tudor Investment Corporation

Graham Broyd
Managing Director
Royal Bank of Scotland

Eric Busay
Portfolio Manager Global Fixed
Income and Currency
CalPERS Investments

David Castle
Managing Director
Standard Chartered Bank

Jeff Feig
Managing Director
Citigroup

Michael Leibowitz
Chief Executive Officer
Tradition Financial Services

Giulio Martini
Chief Investment Officer–
Currency Strategies
AllianceBernstein

John Nixon
Executive Director
ICAP North America

Mike Novogratz
Director and President
Fortress Investment Group LLC

Karen Parker Feld
Principal and Chief Investment Officer
Artemis Financial Advisors LLC

David Rusate
Managing Director–Foreign Exchange
and Commodities
General Electric Company

Federal Reserve Bank of New York (Ex Officio)

Steven Friedman
Assistant Vice President
Federal Reserve Bank of New York

Patricia Mosser
Senior Vice President
Federal Reserve Bank of New York

Jamie Pfeifer
Foreign Exchange Committee Secretariat
Federal Reserve Bank of New York

Brian Sack
Executive Vice President
Federal Reserve Bank of New York

Counsel

Michael Nelson
Counsel and Vice President
Federal Reserve Bank of New York

Acknowledgments

The Foreign Exchange Committee acknowledges the many people who contributed to the Committee's output in 2008 and early 2009, including:

Chief Dealers Working Group Members

2008

Jens Andersen, Morgan Stanley & Co.
Roger Boehler, UBS
Steven Cho, Goldman Sachs & Co.
Michael Chobor, Wells Fargo
Jerry Connor, Bank of Montreal
Peter Gorra, Royal Bank of Scotland
Bill Hughes, Barclays Capital
Simon Jones, Citigroup
Claudia Jury, JP Morgan Chase
Hector Kalb, HSBC
Kevin Lawrie, BNY Mellon
Jack Linker, Reuters
Ed Monaghan, Royal Bank of Canada
Takayuki Nishinaka, Bank of Tokyo-Mitsubishi UFJ
Fulinda Rouse, ICAP
Marco Antonio Sudano, Banco Itau S.A.
Keith Underwood, Standard Chartered Bank
Gordon Wallace, Credit Suisse

Foreign Exchange Committee Liaisons:
Russell LaScala, Deutsche Bank
Jamie Thorsen, Bank of Montreal

Federal Reserve Bank of New York Liaisons:
Mari Baca, Foreign Exchange Committee Secretariat
Richard Charlton, Counsel
Niall Coffey, Foreign Exchange and Investments

2009

Vanessa Barboni, Morgan Stanley & Co.
Roger Boehler, UBS
Robert Bogucki, Barclays Capital
Milko Campusano, Bank of America
Steven Cho, Goldman Sachs & Co.
Michael Chobor, Wells Fargo
Jerry Connor, Bank of Montreal
Erik Depol, Wells Fargo
Michael Gibbens, TD Securities
Peter Gorra, Royal Bank of Scotland
Kelvin Hebburn, Morgan Stanley & Co.
Simon Jones, Citigroup
Claudia Jury, JP Morgan Chase
Kevin Lawrie, BNY Mellon
Jack Linker, Reuters
William McCarthy, State Street Corporation
Patrick McInerny, Standard Chartered Bank
Cameron McKay, Deutsche Bank
Paul Mischenko, HSBC
Ed Monaghan, Royal Bank of Canada
Takayuki Nishinaka, Bank of Tokyo-Mitsubishi UFJ
Fulinda Rouse, ICAP
Marco Antonio Sudano, Banco Itau S.A.
Brian Zirlin, Calyon

Foreign Exchange Committee Liaisons:
Russell LaScala, Deutsche Bank
Jamie Thorsen, Bank of Montreal

Federal Reserve Bank of New York Liaisons:
Richard Charlton, Counsel
Niall Coffey, Foreign Exchange and Investments
Jamie Pfeifer, Foreign Exchange Committee Secretariat

Operation Managers Working Group Members

2008

Arthur Ambrose, Goldman Sachs & Co.
Katherine Andrews, Bank of America
Sal Arena, HSBC
Susan Balogh, Goldman Sachs & Co.
Laura Coward, Bank of Montreal
Olga DeMelo, Bank of Montreal
Joe Demetrio, BNY Mellon
Linda Dunne, State Street Corporation (Chair)
Robert Eby, Barclays Capital
Murali Enamandram, Citigroup
Larry Fitzgerald, Standard Chartered Bank
David Frankel, Morgan Stanley & Co.
John Fusco, Morgan Stanley & Co.
Antonio Carlos Genovese, Banco Itau S.A.
Philip Glackin, JP Morgan Chase
George Helwig, Royal Bank of Scotland
Waleska Jurczak, Wachovia Bank N.A.
Martina Kane, Credit Suisse First Boston

Phil Kenworthy, CLS Bank
Steven Kim, Deutsche Bank
Alister King, Wells Fargo
Tahir Mahmood, Wells Fargo
Michael Mulholland, Credit Suisse First Boston
Graeme Munro, JP Morgan Chase
Jean Napthine, Royal Bank of Canada
Andrew Newcomer, UBS
Ricardo Pacheco, Banco Itau S.A.
Joe Palamara, Wachovia Bank N.A.
Robert Perez, ICAP
Robin Perlen, Bank of America
Ellie Perry, BNY Mellon
Nicholas Picini, Merrill Lynch
Nancy Riyad, HSBC
Michael Rober, State Street Corporation
Daniel Ruperto, Goldman Sachs & Co.
David Schmied, JP Morgan Chase
John Schoen, ICAP
Peter Slater, CLS Bank
Barry Tebbut, UBS
Chris Wood, Merrill Lynch

Foreign Exchange Committee Liaisons:
Robert Catalanello, Calyon
Peter Connolly, Wells Fargo

Federal Reserve Bank of New York Liaisons:
Mari Baca, Foreign Exchange Committee Secretariat
Catherine Kung, Legal
Peter Roethel, Foreign Settlement Services

2009
Arthur Ambrose, Goldman Sachs & Co. (Chair)
Katherine Andrews, Bank of America
Sal Arena, HSBC
Lauren Asaro, Royal Bank of Scotland
Susan Balogh, Goldman Sachs & Co.
Laura Coward, Bank of Montreal
Neil Dello Stritto, Bank of Tokyo-Mitsubishi UFJ
Olga DeMelo, Bank of Montreal
Joe Demetrio, BNY Mellon
Eileen Dignen, SWIFT
Nick Doddy, Barclays Capital
Murali Enamandram, Citigroup
Larry Fitzgerald, Standard Chartered Bank
John Fusco, Morgan Stanley & Co.
Antonio Carlos Genovese, Banco Itau S.A.
Philip Glackin, JP Morgan Chase
Andrew Harvey, Morgan Stanley & Co.
George Helwig, Royal Bank of Scotland
Waleska Jurczak, Wachovia Bank N.A.
Martina Kane, Credit Suisse First Boston
Phil Kenworthy, CLS Bank
Steven Kim, Deutsche Bank
Alister King, Wells Fargo
Tahir Mahmood, Wells Fargo
Rich Maling, State Street Corporation
Michael Mulholland, Credit Suisse First Boston
Graeme Munro, JP Morgan Chase (Deputy Chair)
Jean Napthine, Royal Bank of Canada
Andrew Newcomer, UBS
Ricardo Pacheco, Banco Itau S.A.
Joe Palamara, Wachovia Bank N.A.
Robert Perez, ICAP
Robin Perlen, Bank of America
Ellie Perry, BNY Mellon
Nicholas Picini, Merrill Lynch
Nancy Riyad, HSBC
Michael Rober, State Street Corporation
Stacy Rosenthal, SWIFT
Daniel Ruperto, Goldman Sachs & Co.
David Schmied, JP Morgan Chase
John Schoen, ICAP
Peter Slater, CLS Bank
Chip Sviokla, Deutsche Bank
Barry Tebbut, UBS
Chris Wood, Merrill Lynch

Foreign Exchange Committee Liaisons:
Robert Catalanello, Calyon
Peter Connolly, Wells Fargo

Federal Reserve Bank of New York Liaisons:
Catherine Kung, Legal
Jamie Pfeifer, Foreign Exchange Committee Secretariat
Peter Roethel, Foreign Settlement Services

Index to 1997-2008 Annual Reports

The Foreign Exchange Committee ■ 33 Liberty Street, 9th Floor ■ New York, NY 10045 ■ www.newyorkfed.org/fxc

2008 Annual Report