

***The Foreign  
Exchange Committee***



***Annual Report  
2007***

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## ■ CHAIR'S LETTER

*"May you live in interesting times . . .":* This maxim—often described as the English translation of an ancient Chinese proverb—is the first of three invocations of increasing severity. The events of the past year have certainly galvanized the attention of those in the global markets and have become a focus for the discussions of my colleagues on the Foreign Exchange Committee. As I write this letter, I believe we are still in the early stages of significant changes to the financial landscape.

The Committee began the year by looking at the evolution of the foreign exchange industry, with an emphasis on developments in transparency, best execution, and electronic trading. Working groups examined retail foreign exchange, the influence of technology on market practices, and the effect of proposed regulatory change in the United Kingdom (the Markets in Financial Instruments Directive, or MiFID). In addition, the Committee discussed broadening its perspective by soliciting buy-side input and began a study of issues arising out of the intersection of multiple trading platforms, dark pools of liquidity, and path-dependent options.

By midyear, it became obvious that many of these topics overlapped—technology affected market structure, and the fastest growing components of the foreign exchange market, that is, retail foreign exchange and high-frequency machine-to-machine trading, appeared to be nontraditional. This observation led to discussions of prime brokerage and the desire for more granular data on volume growth by target market segment. The Committee maintains an active dialogue with the Operations Managers Working Group as well as with foreign exchange committees around the world and their sponsoring central banks as it attempts to develop timelier and more accurate trend analysis.

The seismic disruptions to the global financial markets beginning in the summer of 2007 and persisting through the second half of the year focused the Committee's work on market function, liquidity, systemic risk, and risk management. Despite the ruptures observed elsewhere, the foreign exchange market appears to have served all of its various constituents well, while processing record volumes in an environment of constant reevaluation of risk premia. That being said, we realize that we are in the midst of fundamental changes to the structure of the global financial markets. The Committee continues to anticipate, analyze, and react to these events.

The challenges posed by credit, leverage, and liquidity, along with conspicuous failures in risk management, compelled the Committee to accelerate its review of trading guidelines and best practices. As such, an updated version of the *Guidelines for Foreign Exchange Trading Activities* was published on the Foreign Exchange Committee's website in May 2008. As technology, business conditions, and business models evolve, the Committee will continue to update this document, as we believe it lays a foundation for the advanced management practices that stabilize the foreign exchange market.

The "Works in Progress" section of this report highlights some of the current concerns of the Committee. While the foreign exchange market has functioned well in the face of unprecedented turbulence, the financial services industry will likely be permanently altered. Some of the observed resiliency of the foreign exchange market no doubt reflects its adaptability. This adaptability, in turn, is derived from the commitment of public as well as private sector participants to embrace change through the lens of market integrity.

I am grateful to my colleagues who serve on this advisory committee to the Federal Reserve Bank of New York for their dedication, professionalism, candor, and concern that transcends parochial interest. The Committee will continue to assess the effect of events on market structure, market discipline, market liquidity, and business practices. We expected 2008 to be no less "interesting" than 2007; thus far, the year seems to be meeting our expectations.

The other maxims in the aforementioned Chinese trilogy are:

*May you come to the attention of those in authority*

and

*May you find what you are looking for.*

**Rich Mahoney**



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*Actions and  
Initiatives*

# Works in Progress for 2008

In 2007, the Committee continued its work of identifying risks associated with the evolution of the foreign exchange market. The Committee explored issues surrounding technological developments in the marketplace and considered their impact on market structure and functioning. It also discussed market practices concerning barrier options as well as established a framework for broadening the dialogue on foreign exchange to include participation from the buy-side community. Finally, the Committee continued its efforts—in conjunction with the International Swaps and Derivatives Association, Inc., and EMTA, Inc.—to publish documentation and guidance on non-deliverable forward foreign exchange transactions as well as updated documentation on foreign exchange and currency option definitions.

In early 2008, the Committee completed a review and revision of its *Guidelines for Foreign Exchange Trading Activities*. During the remainder of 2008, it plans to update its guidance on best practices for foreign exchange prime brokerage. Additionally, the Committee will continue to monitor and assess the effects of emerging issues and regulatory developments on market conditions and practices in the foreign exchange market. The Committee will also begin discussions with buy-side participants on market conditions and industry developments.

## **Revised Trading Guidance**

As the foreign exchange industry evolves, the Committee recognizes the value of revising its guidance to address emerging issues. In early 2008, it completed a review and revision of its best-practices publication *Guidelines for Foreign Exchange Trading Activities* in order to better reflect developments in the market.

## **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 in its initiative to update best-practice guidance on foreign exchange prime brokerage.

The agenda of the Operations Managers Working Group includes continuing its efforts to explore the changing nature of the confirmation process and the implications of advances in technology and electronic trading; to drive the automation of the foreign exchange option confirmation process; and to update, as needed, the Committee's guidance on managing operational risk in foreign exchange.

# 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 joined together 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 and also 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 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). FMLG 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; and the Financial Markets Law Committee and the Foreign Exchange Joint Standing Committee, sponsored by the Bank of England. This year, the FMLG participated in a successful quadrilateral meeting of representatives of the European Financial Markets Lawyers Group, the Financial Law Board, and the Financial Markets Law Committee.

## FMLG Initiatives during 2007

Many of the FMLG's projects in 2007 underscore its strong bond with the Foreign Exchange Committee. Other efforts reflect the FMLG's policy interests and the coherent relationship that has evolved among legal-oriented industry groups within the global community.

### *NDF Master Confirmation Agreement*

This year, the FMLG played a key role in assisting the Committee and coordinating with the Foreign Exchange Joint Standing Committee and EMTA, Inc., in the development of the industry's first multilateral form of the Master Confirmation Agreement for Non-Deliverable FX Transactions (NDFs). The Multilateral Master Confirmation Agreement was published in November 2007 to provide market documentation for NDFs that would streamline confirmation processes by automatically incorporating terms of currency-specific NDF confirmation templates published by EMTA, Inc. The Agreement also allows parties to confirm their NDFs in a variety of ways, including by electronic messaging on electronic trading, messaging, or settlement systems. The Practice Notes to the Multilateral Master Confirmation Agreement were published in March 2008.

### *FMLG-CLS Working Group*

The FMLG established a working group, with the participation of representatives from CLS Bank, to lend expertise in CLS Bank's plans to initiate settlement services for NDFs and currency option premiums. The FMLG provided input on CLS Bank's documentation associated with this initiative, which is expected to be implemented in April 2008.

### *Prime Brokerage*

The FMLG continues its work in the prime brokerage arena, forming working groups that have undertaken studies of foreign exchange prime brokerage relationships and fixed-income prime brokerage principal letters. The FMLG will continue to provide industry guidance in this area, as necessary.

### *Monitoring Legislative, Regulatory, and Judicial Action*

Throughout 2007, the FMLG closely followed pending legislation and regulation that could potentially affect the foreign exchange and financial markets. It joined with other industry groups in commenting on and endorsing the enactment of netting-friendly legislation in Canada. The FMLG also continues to share its expertise with regulators on how the customer due diligence requirements of the USA Patriot Act should apply in the foreign exchange prime brokerage context.

### *Opinions*

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



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*Publications*

## ■ ANNOUNCEMENT

### **Amendments to Annex A to the *1998 FX and Currency Option Definitions*, Updated January 12, 2007**

New York, January 12, 2007

Annex A to the *1998 Foreign Exchange and Currency Option Definitions* was last updated and published in its entirety on September 25, 2000, by the International Swaps and Derivatives Association, Inc. (ISDA), EMTA, Inc. (EMTA), and the Foreign Exchange Committee (FXC). Since then, a number of amendments to Annex A have been published by ISDA, EMTA, and the FXC. Pending the publication of an update in its entirety at an appropriate time in the future, all amendments made to Annex A since September 25, 2000, have been published in this Compendium, dated January 12, 2007.

Each amendment listed in the Compendium established a new version of Annex A as of, and identified by, the effective date of such amendment. Parties to a transaction may identify in the confirmation by date the specific version of Annex A that is intended by the parties to apply. In the absence of specificity in the confirmation, the parties will be deemed to have intended that Annex A as amended up to and including the trade date of the transaction will apply. Consult the "Practitioner's Notes" to each amendment (included in the Compendium) for further information.

The complete document can be found at <<http://www.newyorkfed.org/fxc/2007/fxc011207.pdf>>.

## ■ ANNOUNCEMENT

### **The Multilateral Master Confirmation Agreement for Non-Deliverable Forward FX Transactions**

New York, October 31, 2007

The Foreign Exchange Committee (FXC), EMTA, Inc. (EMTA), and the FX Joint Standing Committee (FX JSC) jointly announce the publication of the Multilateral Master Confirmation Agreement for Non-Deliverable Forward FX Transactions (the "Multilateral Master Agreement"). The Multilateral Master Agreement is being provided to the market as an additional tool to facilitate the process of confirming non-deliverable forward FX transactions ("NDFs") between counterparties. The terms of the Multilateral Master Agreement are based on the Bilateral Master Confirmation Agreement for NDFs published by the cosponsors in December 2006, which is designed for execution between two counterparties. The Multilateral Master Agreement is designed to be implemented or otherwise administered by electronic messaging, trading, or settlement systems or organizations to enable their members to confirm trades in NDFs subject to accepted industry terms.

The Multilateral Master Agreement carries over the benefits of streamlining confirmation processes for NDF trades within service providers or organizations that administer it by incorporating by reference terms of the currency-specific NDF template terms published by EMTA, Inc. In order to promote use of standard industry terms, the Multilateral Master Agreement is intended to be implemented and incorporated as a whole by a service provider or organization through its rules, by protocol, or other form of membership agreement. At the same time, the Multilateral Master Agreement allows a service provider or organization to tailor certain provisions or modify certain default rules when appropriate to meet its individual requirements.

The cosponsors encourage service providers and organizations to consider implementing the Multilateral Master Confirmation Agreement as a means to enhance market efficiency by facilitating the trading and confirmation processes for NDFs. The cosponsors will work with any electronic system interested in implementing the Multilateral Master Confirmation.

The document can be accessed at the following link: <<http://www.newyorkfed.org/fxc/2007/103107a.pdf>>.

# Multilateral Master Confirmation Agreement

## for Non-Deliverable Forward FX Transactions\*

This Multilateral Master Confirmation Agreement for Non-Deliverable Forward FX Transactions (“Multilateral Master Confirmation”) is by and among each party hereto (each, an “Adhering Party” and together, the “Adhering Parties”). Each Adhering Party wishes to facilitate the process of entering into and confirming non-deliverable forward foreign exchange transactions with each other Adhering Party and agrees as follows:

- 1. Application:** This Multilateral Master Confirmation shall apply to each non-deliverable forward foreign exchange transaction (“NDF Transaction”) entered into between two Adhering Parties on or after the Effective Date, or where such NDF Transaction or payments related thereto are processed or settled on or after the Effective Date, in an electronic messaging, trading, or settlement system or organization which implements or otherwise administers this Multilateral Master Confirmation through its rules, by protocol or other form of agreement (the “Sponsor”).
- 2. Effective Date:** The Effective Date shall be the date on which a party will be bound to the terms of this Multilateral Master Confirmation as an Adhering Party. The Effective Date as between any two Adhering Parties shall be as specified in the applicable rules, protocol, or other form of agreement of the Sponsor of this Multilateral Master Confirmation. An Adhering Party may revoke its adherence to the terms of this Multilateral Master Confirmation in accordance with the applicable rules, protocol, or other form of agreement of the Sponsor of this Multilateral Master Confirmation.
- 3. FX Definitions:** The definitions and provisions contained in the *1998 FX and Currency Option Definitions* (including Annex A thereto), as published by the International Swaps and Derivatives Association, Inc., EMTA, Inc. (“EMTA”) and the Foreign Exchange Committee, and as modified or amended in the Master Agreement (as defined in paragraph 11 below) (the “1998 Definitions”), are incorporated into this Multilateral Master Confirmation. Any amendments or successor definitions to the 1998 Definitions are incorporated into this Multilateral Master Confirmation with respect to each NDF Transaction that has a Trade Date that falls on or after the effective date of such amendments or successor definitions, and are referred to herein (together with the 1998 Definitions) as the FX Definitions. For the avoidance of doubt, if amendments or successor definitions to the 1998 Definitions become effective after the Trade Date of a NDF Transaction, such amendments or successor definitions shall not apply to or amend the terms of such NDF Transaction, unless otherwise agreed by the Adhering Parties that entered into such NDF Transaction.
- 4. Transaction Confirmation:** The Adhering Parties shall confirm the Economic Terms (as defined in paragraph 6 below) of each NDF Transaction in a confirmation (each such confirmation, a “Transaction Confirmation”). Each Transaction Confirmation may be executed and delivered in counterparts (including by facsimile transmission), or may be created by an exchange of telexes, an exchange of electronic messages (including, without limitation, by means of matching electronic messages sent by each Adhering Party), or an exchange of e-mails. Each Transaction Confirmation shall be deemed to incorporate and be subject to all of the

\*Published on October 31, 2007, by the Foreign Exchange Committee, EMTA, Inc., and the FX Joint Standing Committee.

terms of this Multilateral Master Confirmation. This Multilateral Master Confirmation, together with each Transaction Confirmation, constitutes a "Confirmation" as referred to in, and is subject to, the terms and conditions of the Master Agreement.

5. **Relevant EMTA Template:** If, on the Trade Date of a NDF Transaction, template terms for the confirmation of a NDF Transaction in the Currency Pair that is the subject of such NDF Transaction are recommended by EMTA or a recognized successor and have an effective date that falls on or before such Trade Date ("Relevant EMTA Template"), then all of the terms of such Relevant EMTA Template (published and available at [www.emta.org](http://www.emta.org) or any successor website) shall apply to such NDF Transaction, except to the extent otherwise provided in a Transaction Confirmation. For the avoidance of doubt, if a Relevant EMTA Template becomes effective after the Trade Date of a NDF Transaction, such Relevant EMTA Template shall not apply to or amend the terms of such NDF Transaction, unless otherwise agreed by the Adhering Parties that entered into such NDF Transaction. If, on the Trade Date of a NDF Transaction, a Relevant EMTA Template is not in effect with respect to the Currency Pair that is the subject of such NDF Transaction, then the following terms shall apply to such NDF Transaction and be deemed part of the Transaction Confirmation, if they are agreed to by the Adhering Parties on or prior to the Trade Date of such NDF Transaction: (x) any terms for the confirmation of a NDF Transaction in such Currency Pair that the Adhering Parties have agreed to apply generally to all NDF Transactions between them in such Currency Pair, and (y) any terms included in a confirmation executed by the Adhering Parties with respect to such NDF Transaction.

6. **Economic Terms:** Each Transaction Confirmation shall specify the following terms or, alternatively, the terms that the Adhering Parties agree to specify in their Transaction Confirmation by using the facilities of the Sponsor ("Economic Terms"):

- Trade Date
- Reference Currency
- Reference Currency Notional Amount
- Notional Amount or Forward Rate
- Reference Currency Buyer
- Reference Currency Seller
- Settlement Currency
- Valuation Date [Specify date only; all other terms in the Relevant EMTA Template apply.]
- Settlement Date [Specify date only; all other terms in the Relevant EMTA Template apply.]
- Settlement

This Multilateral Master Confirmation shall apply only if the Transaction Confirmation specifies, or the Adhering Parties otherwise agree in the Transaction Confirmation, that Settlement is Non-Deliverable.

7. **Priority:**

- (a) In the event of any inconsistency between the FX Definitions and a Confirmation, the Confirmation shall prevail. In the event of any inconsistency between the provisions of a Transaction Confirmation and the Master Agreement, the Transaction Confirmation shall prevail for the purpose of the relevant NDF Transaction.
- (b) In the event of any inconsistency between a Transaction Confirmation and a Relevant EMTA Template, the Transaction Confirmation shall prevail.
- (c) With respect to two Adhering Parties that are or become subject to a Bilateral Master Confirmation, the following rules of priority apply:
  - (i) If the Adhering Parties sign onto or become subject to a Bilateral Master Confirmation after the Effective Date, in the event of any inconsistency between this Multilateral Master Confirmation and such Bilateral Master Confirmation, such Bilateral Master Confirmation shall prevail with respect to NDF Transactions governed by such Bilateral Master Confirmation, unless otherwise agreed by the Adhering Parties; and
  - (ii) If the Adhering Parties have signed onto or are subject to a Bilateral Master Confirmation on or before the Effective Date, in the event of any inconsistency between this Multilateral Master Confirmation and such Bilateral Master Confirmation, this Multilateral Master Confirmation shall prevail over the Bilateral Master Confirmation with respect to the NDF Transactions that fall within the application of paragraph (i) above, unless otherwise agreed by the Adhering Parties.

For the avoidance of doubt, if, as between two Adhering Parties, the Effective Date of this Multilateral Master Confirmation occurs after the Trade Date of a NDF Transaction between them, this Multilateral Master Confirmation shall not apply to or amend the terms of such NDF Transaction, unless otherwise agreed by the Adhering Parties.

8. **Quoting Dealing Disclaimer:** The Adhering Parties acknowledge that one or both of them, 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 an industry rate for the Currency Pair that is the subject of a NDF Transaction between them and that such quotation may affect, materially or otherwise, the settlement of the NDF Transaction.

9. **Representations:** Each Adhering Party will be deemed to represent to the other Adhering Party on the date on which it enters into a NDF Transaction that:

(a) this Multilateral Master Confirmation is a legal, valid and binding obligation of such Adhering Party, enforceable against such Adhering Party in accordance with its terms.

(b) absent a written agreement between the Adhering Parties that expressly imposes affirmative obligations to the contrary for that NDF Transaction: (i)(A) it is acting for its own account, and it has made its own independent decisions to enter into that NDF Transaction and as to whether that NDF Transaction is appropriate or proper for it based upon its own judgment and upon advice from such advisors as it has deemed necessary; (B) it is not relying on any communications (written or oral) of the other Adhering Party as investment advice or as a recommendation to enter into that NDF Transaction, it being understood that information and explanations related to the terms and conditions of a NDF Transaction shall not be considered investment advice or a recommendation to enter into that NDF Transaction; and (C) it has not received from the other Adhering Party any assurance or guarantee as to the expected results of that NDF Transaction; (ii) it is capable of evaluating and understanding (on its own behalf or through independent professional advice), and understands and accepts, the terms, conditions and risks of that NDF Transaction; and (iii) the other Adhering Party is not acting as a fiduciary or an advisor for it in respect of that NDF Transaction.

10. **Calculation Agent:** Unless otherwise specified in the applicable rules, protocol, or other form of agreement of the Sponsor of this Multilateral Master Confirmation, the Calculation Agent for a NDF Transaction shall be (a) both Adhering Parties that have entered the NDF Transaction, if each Adhering Party is a member of the Sponsor (a "Member") or a dealer affiliate of a Member, or if neither Adhering Party is a Member or a dealer affiliate of a Member, or (b) in all other circumstances, solely the Adhering Party that is a Member or a dealer affiliate of a Member. If both Adhering Parties are Calculation Agents for a NDF Transaction, and the Adhering Parties are unable to agree on a determination within one Business Day, each Adhering 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 Adhering 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 Adhering Parties. If the Adhering Parties are unable to agree on an independent leading dealer to act as substitute Calculation Agent, each Adhering Party shall select an independent leading dealer, and such independent leading dealers shall agree on an independent third party who shall be deemed to be the substitute Calculation Agent.

11. **Master Agreement:** The Master Agreement as between two Adhering Parties shall be the ISDA Master Agreement which governs foreign exchange transactions, IFEMA, FEOMA, or IFXCO that they have entered, as amended from time to time. If such Adhering Parties have not entered such an agreement, unless otherwise specified in the applicable rules, protocol, or other form of agreement of the Sponsor of this Multilateral Master Confirmation, the Master Agreement shall be an agreement in the form of 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. Upon execution of an ISDA Master Agreement which governs foreign exchange transactions, IFEMA, FEOMA, or IFXCO between the Adhering Parties, such agreement, as amended from time to time, shall be the Master Agreement. This Multilateral Master Confirmation shall supplement, form a part of, and be subject to the terms and conditions of the Master Agreement.

12. **Governing Law/Jurisdiction:** This Multilateral Master Confirmation shall be governed by the law, and the provisions on submission to jurisdiction, elected in the Master Agreement.

## ■ ANNOUNCEMENT

### **New Rate Source Definition for the Peruvian Sol**

New York, November 15, 2007

The International Swaps and Derivatives Association, EMTA, Inc., and the Foreign Exchange Committee today jointly announced an amendment to Annex A of the *1998 FX and Currency Option Definitions* to add a new rate source definition for the Peruvian sol. Effective as of November 15, 2007, Annex A is amended to add a new Section 4.5(c)(vii)(E) as follows:

(vii) **Peruvian Sol**

(E) "PEN INTERBANK AVE" or "PEN05" each means that the Spot Rate for a Rate Calculation Date will be the Peruvian Sol / U.S. Dollar average exchange rate in the interbank market expressed as the amount of Peruvian New Soles per one U.S. Dollar for settlement on the same day reported by the Banco Central de Reserva del Peru ([www.bcrp.gob.pe](http://www.bcrp.gob.pe)) as the "Tipo de Cambio Interbancario Promedio" at approximately 2:00 p.m., Lima time, on that Rate Calculation Date.

### **Practitioner's Notes:**

- PEN05 describes the average rate of the interbank market published by the Banco Central de Reserva del Peru, rounded to the fourth decimal point (e.g., 1.0000).
- The PEN WT AVE (PEN05) rate is also currently published on Reuters Page PEBCR05.
- Parties that specify in confirmations that a particular version of Annex A applies to their trades should reference Annex A effective as of November 15, 2007, if they desire to incorporate the above rate source definition into their trades. If parties do not specify in their confirmations a particular version of Annex A, the above rate source definition will apply to trades that incorporate the *1998 FX and Currency Option Definitions* and have a trade date on or after November 15, 2007.

## ■ 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

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# 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.<sup>1</sup>

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.<sup>2</sup> 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.<sup>3</sup>

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.<sup>4</sup> 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.<sup>5</sup> 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.<sup>6</sup> 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.<sup>7</sup> 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.<sup>8</sup>

### *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.<sup>9</sup> 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*<sup>10</sup>

#### 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.<sup>11</sup>

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.<sup>12</sup>

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.<sup>13</sup> It is the responsibility of a salesperson to determine whether the customer is requesting pricing for dealing purposes or for valuation purposes.<sup>14</sup> 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<sup>15</sup> and a third specifying operational procedures for collateralized transactions.<sup>16</sup>

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.<sup>17</sup>

### *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.<sup>18</sup>

### *Netting*<sup>19</sup>

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.<sup>20</sup> 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.<sup>21</sup>

### *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**<sup>22</sup> 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.<sup>23</sup>

##### **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.<sup>24</sup>

##### 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.<sup>25</sup>

#### 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,<sup>26</sup> 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).<sup>27</sup>

**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;
- renegeing 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

Contact: Mari Baca  
Telephone: 212-720-1707

### **Foreign Exchange Committee Releases FX Volume Survey Results**

New York, January 28, 2008

The Foreign Exchange Committee today released the results of its seventh Survey of North American Foreign Exchange Volume. For the October 2007 reporting period, key findings include:

- average daily volume in over-the-counter foreign exchange instruments (including spot transactions, outright forwards, foreign exchange swaps, and options) totaled \$701 billion;
- average daily volume of transactions across all instruments increased by 31.3 percent overall compared with the October 2006 reporting period;
- the percentage of total volume derived from spot transactions rose from 44 percent in April 2007 to 53 percent in October 2007, as reported spot volume rose 35 percent while volumes for all other instruments remained flat or declined.

"Our latest survey shows a dramatic increase in overall foreign exchange volume since our last survey, the bulk of which has been driven by an increase in spot trades," said Richard Mahoney, Chair of the Foreign Exchange Committee. "The Foreign Exchange Committee's semi-annual volume survey continues to be a valuable tool for following trends in the foreign exchange market. We think that the fact that this survey was conducted last fall during a time of some concern about market functionality and liquidity makes it especially useful for market participants."

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 thirty-one leading financial institutions active in the North American foreign exchange market to contribute data on the level of turnover during the month of October 2007. The Committee also collaborated with the United Kingdom's Foreign Exchange Joint Standing Committee (FXJSC), the Singapore Foreign Exchange Market Committee (SFEMC), and the Canadian Foreign Exchange Committee (CFEC), which conducted similar surveys for the U.K., Singaporean, and Canadian markets, respectively, over the same time period. The FXJSC, the SFEMC, and the CFEC are releasing their survey results today.

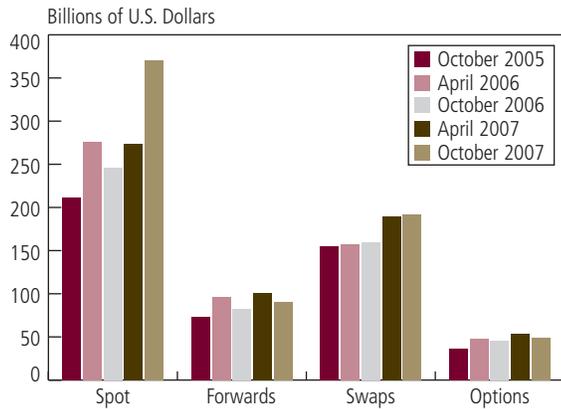
For the purposes of the survey, turnover is defined as the gross value of all new deals entered into during the reporting period and is measured in terms of the notional amount of the contracts. Survey data are broken out by four foreign exchange instruments, thirteen currency pairs, four counterparty 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 <<http://www.newyorkfed.org/fxc/volumesurvey>>. The results of the Foreign Exchange Joint Standing Committee's survey for the

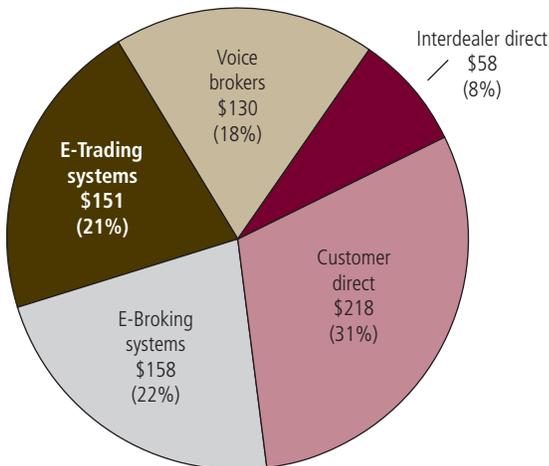
U.K. market can be found at <<http://www.bankofengland.co.uk/markets/forex/fxjsc/index.htm>>. The results of the Singapore Foreign Exchange Market Committee's survey for the Singaporean market can be found at <<http://www.sfmc.org/statistics.asp>>. The results of the Canadian Foreign Exchange Committee's survey for the Canadian market can be found at <[http://www.cfec.ca/fx\\_volume.html](http://www.cfec.ca/fx_volume.html)>.

**Average Daily Volume by Foreign Exchange Instrument**



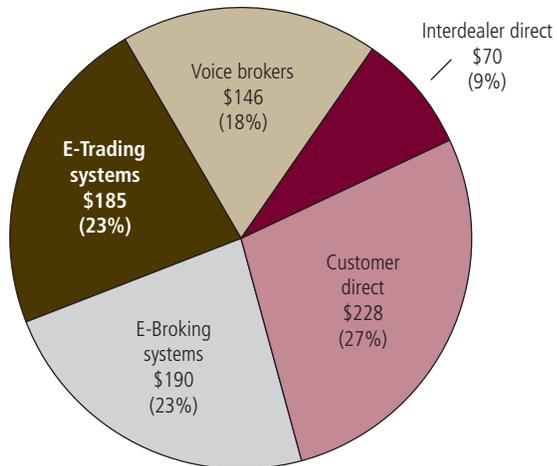
**Average Daily Volume by Dealing Channel, April 2007**

Billions of U.S. Dollars  
Total = \$716\*



**Average Daily Volume by Dealing Channel, October 2007**

Billions of U.S. Dollars  
Total = \$818\*



\*Volume figures include spot, forwards, swaps, and options. The data are unadjusted for double-counting among reporting 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-one trading days in the United States in April 2007 and by twenty-three trading days in the United States in October 2007. There were thirty-one reporting dealers for the 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

Bear Stearns

BNP Paribas

Calyon

Canadian Imperial Bank of Commerce

Citigroup

CSFB

Deutsche Bank AG

Dresdner Bank AG

Goldman Sachs & Co.

HSBC Bank USA

JPMorgan Chase Bank

Lehman Brothers

Mellon Bank N.A.

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.

## Tables

### MARKET SHARE, October 2007

Percent

Instrument	First Quintile (Six Dealers)	Second Quintile (Six Dealers)	Third Quintile (Six Dealers)	Fourth Quintile (Six Dealers)	Last Quintile (Seven Dealers)
<b>SPOT TRANSACTIONS</b>					
Ranges held	≥4.55	4.12 - 2.38	2.19 - 1.32	0.90 - 0.62	≤0.37
Market share	64.70	17.36	11.19	4.82	1.92
<b>OUTRIGHT FORWARDS</b>					
Ranges held	≥6.02	5.73 - 2.53	2.48 - 1.06	0.69 - 0.24	≤0.23
Market share	60.22	24.96	10.84	3.26	0.73
<b>FOREIGN EXCHANGE SWAPS</b>					
Ranges held	≥5.72	5.01 - 4.08	4.07 - 1.52	1.38 - 0.67	≤0.53
Market share	46.10	27.00	18.78	5.86	2.25
<b>OTC FOREIGN EXCHANGE OPTIONS</b>					
Ranges held	≥6.05	5.90 - 3.86	3.09 - 1.32	0.84 - 0.16	≤0.11
Market share	55.21	28.58	12.70	3.17	0.35
<b>COUNTERPARTY</b>					
Counterparty	First Quintile (Six Dealers)	Second Quintile (Six Dealers)	Third Quintile (Six Dealers)	Fourth Quintile (Six Dealers)	Last Quintile (Seven Dealers)
<b>REPORTING DEALERS</b>					
Ranges held	≥6.73	5.64 - 2.47	2.27 - 1.59	1.48 - 0.65	≤0.64
Market share	55.74	24.41	11.39	5.91	2.55
<b>OTHER DEALERS</b>					
Ranges held	≥4.21	4.05 - 3.04	2.54 - 1.94	1.18 - 0.62	≤0.59
Market share	59.37	19.78	13.31	5.67	1.85
<b>OTHER FINANCIAL CUSTOMERS</b>					
Ranges held	≥6.98	5.30 - 2.25	1.98 - 0.44	0.39 - 0.15	≤0.10
Market share	70.20	21.21	6.74	1.57	0.28
<b>NONFINANCIAL CUSTOMERS</b>					
Ranges held	≥4.70	4.55 - 1.78	1.74 - 0.81	0.73 - 0.49	≤0.43
Market share	70.72	16.34	7.55	3.71	1.71

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 2007**

Percent

<b>Currency Pair</b>	<b>First Quintile (Six Dealers)</b>	<b>Second Quintile (Six Dealers)</b>	<b>Third Quintile (Six Dealers)</b>	<b>Fourth Quintile (Six Dealers)</b>	<b>Last Quintile (Seven Dealers)</b>
<b>U.S. DOLLAR VERSUS</b>					
Euro					
Ranges held	≥4.61	4.52 - 2.93	2.77 - 2.02	1.14 - 0.62	≤0.36
Market share	57.11	22.17	14.19	5.05	1.48
Japanese yen					
Ranges held	≥5.63	4.85 - 2.44	2.28 - 1.82	1.33 - 0.59	≤0.58
Market share	58.12	22.21	12.28	5.38	2.04
British pound					
Ranges held	≥4.99	4.94 - 2.86	2.68 - 1.02	0.89 - 0.35	≤0.28
Market share	61.61	22.65	10.70	3.84	1.19
Canadian dollar					
Ranges held	≥5.58	4.91 - 3.41	3.34 - 1.45	1.01 - 0.34	≤0.28
Market share	55.47	24.31	15.16	4.10	0.95
Swiss franc					
Ranges held	≥5.22	4.09 - 2.44	2.24 - 1.22	0.82 - 0.19	≤0.16
Market share	67.68	18.48	10.39	2.77	0.68
Australian dollar					
Ranges held	≥5.90	5.10 - 2.88	2.66 - 1.37	1.20 - 0.26	≤0.25
Market share	59.28	23.62	11.81	4.27	1.01
Argentine peso					
Ranges held	≥6.31	5.56 - 2.12	1.97 - 0.13	0.00 - 0.00	≤0.00
Market share	70.07	22.05	7.87	0.00	0.00
Brazilian real					
Ranges held	≥4.39	4.22 - 2.02	1.92 - 0.72	0.57 - 0.03	≤0.03
Market share	70.22	20.10	8.18	1.46	0.03
Chilean peso					
Ranges held	≥3.86	3.85 - 2.34	2.25 - 0.12	0.06 - 0.00	≤0.00
Market share	76.48	18.93	4.37	0.20	0.00
Mexican peso					
Ranges held	≥6.96	6.95 - 2.84	2.49 - 1.39	1.11 - 0.27	≤0.20
Market share	57.46	26.76	10.44	4.85	0.46
All other currencies					
Ranges held	≥7.31	6.40 - 3.41	2.63 - 1.34	1.04 - 0.47	≤0.46
Market share	57.16	26.09	11.48	4.17	1.10
<b>EURO VERSUS</b>					
Japanese yen					
Ranges held	≥3.49	3.43 - 1.43	1.28 - 0.78	0.71 - 0.45	≤0.36
Market share	74.91	14.36	5.82	3.68	1.22
British pound					
Ranges held	≥4.41	4.28 - 2.34	2.07 - 1.18	1.03 - 0.44	≤0.40
Market share	65.24	19.90	9.87	3.92	1.05
Swiss franc					
Ranges held	≥4.59	4.54 - 2.12	2.08 - 1.14	0.96 - 0.13	≤0.12
Market share	66.86	20.02	9.63	2.98	0.51
<b>ALL OTHER CURRENCY PAIRS</b>					
Ranges held	≥5.66	5.07 - 4.57	2.89 - 1.52	1.33 - 0.67	≤0.65
Market share	49.51	29.27	13.70	6.18	1.36

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 2007**

Percent

<b>Instrument</b>	First Quintile (Six Dealers)	Second Quintile (Six Dealers)	Third Quintile (Six Dealers)	Fourth Quintile (Six Dealers)	Last Quintile (Seven Dealers)
<b>SPOT TRANSACTIONS</b>					
Ranges held	≥6.26	5.63 - 2.94	2.89 - 1.24	1.11 - 0.59	≤0.36
Market share	58.29	22.09	12.22	5.58	1.82
<b>OUTRIGHT FORWARDS</b>					
Ranges held	≥6.22	4.93 - 2.49	2.25 - 0.80	0.52 - 0.44	≤0.28
Market share	62.52	25.06	8.84	2.91	0.68
<b>FOREIGN EXCHANGE SWAPS</b>					
Ranges held	≥5.93	5.74 - 3.50	3.34 - 1.21	1.06 - 0.63	≤0.50
Market share	50.48	30.07	12.71	5.24	1.51
<b>OTC FOREIGN EXCHANGE OPTIONS</b>					
Ranges held	≥7.30	5.91 - 2.95	2.46 - 1.13	0.64 - 0.31	≤0.23
Market share	64.06	22.65	9.82	2.95	0.52
<b>Counterparty</b>					
	First Quintile (Six Dealers)	Second Quintile (Six Dealers)	Third Quintile (Six Dealers)	Fourth Quintile (Six Dealers)	Last Quintile (Seven Dealers)
<b>REPORTING DEALERS</b>					
Ranges held	≥7.28	6.11 - 2.44	2.41 - 1.56	1.55 - 0.62	≤0.60
Market share	57.28	22.69	11.06	6.30	2.68
<b>OTHER DEALERS</b>					
Ranges held	≥5.81	5.07 - 3.16	3.13 - 1.41	1.33 - 0.59	≤0.43
Market share	54.28	24.58	14.08	5.71	1.34
<b>OTHER FINANCIAL CUSTOMERS</b>					
Ranges held	≥9.43	6.15 - 1.97	1.80 - 0.37	0.28 - 0.12	≤0.12
Market share	67.22	23.88	7.42	1.18	0.28
<b>NONFINANCIAL CUSTOMERS</b>					
Ranges held	≥5.12	3.41 - 1.94	1.44 - 1.07	0.83 - 0.38	≤0.31
Market share	73.52	14.01	7.50	3.70	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, April 2007**

Percent

<b>Currency Pair</b>	<b>First Quintile (Six Dealers)</b>	<b>Second Quintile (Six Dealers)</b>	<b>Third Quintile (Six Dealers)</b>	<b>Fourth Quintile (Six Dealers)</b>	<b>Last Quintile (Seven Dealers)</b>
<b>U.S. DOLLAR VERSUS</b>					
Euro					
Ranges held	≥7.25	7.17 - 2.80	2.28 - 1.26	1.20 - 0.53	≤0.28
Market share	54.81	28.46	10.94	4.54	1.25
Japanese yen					
Ranges held	≥6.32	5.87 - 2.57	2.54 - 1.29	0.91 - 0.53	≤0.47
Market share	58.76	24.03	11.04	4.56	1.58
British pound					
Ranges held	≥7.46	6.52 - 2.73	2.09 - 1.25	1.09 - 0.26	≤0.20
Market share	60.28	23.84	10.63	4.41	0.83
Canadian dollar					
Ranges held	≥5.77	5.55 - 4.47	3.99 - 1.60	1.14 - 0.52	≤0.33
Market share	47.49	29.33	17.06	4.92	1.17
Swiss franc					
Ranges held	≥5.74	5.72 - 2.41	1.99 - 1.29	0.94 - 0.45	≤0.25
Market share	61.24	24.05	9.97	3.96	0.78
Australian dollar					
Ranges held	≥7.62	7.04 - 3.28	3.02 - 1.36	1.20 - 0.36	≤0.29
Market share	48.83	31.28	13.79	5.36	0.75
Argentine peso					
Ranges held	≥7.03	3.76 - 1.95	1.03 - 0.11	0.00 - 0.00	≤0.00
Market share	78.08	17.73	4.20	0.00	0.00
Brazilian real					
Ranges held	≥6.33	5.07 - 1.95	1.30 - 0.73	0.66 - 0.04	≤0.03
Market share	71.76	20.08	6.31	1.81	0.04
Chilean peso					
Ranges held	≥6.03	4.56 - 2.23	1.63 - 0.09	0.07 - 0.00	≤0.00
Market share	75.26	20.26	4.41	0.10	0.00
Mexican peso					
Ranges held	≥5.93	5.79 - 3.19	3.04 - 0.96	0.66 - 0.12	≤0.10
Market share	57.10	28.50	11.30	2.79	0.29
All other currencies					
Ranges held	≥5.84	5.06 - 4.03	3.10 - 1.26	1.03 - 0.31	≤0.28
Market share	57.71	26.92	11.10	3.43	0.83
<b>EURO VERSUS</b>					
Japanese yen					
Ranges held	≥7.32	5.44 - 2.05	1.84 - 0.92	0.81 - 0.52	≤0.50
Market share	67.10	20.61	7.14	3.96	1.20
British pound					
Ranges held	≥5.57	4.86 - 3.01	3.01 - 1.43	1.41 - 0.39	≤0.35
Market share	57.56	23.25	12.57	5.46	1.14
Swiss franc					
Ranges held	≥6.49	5.04 - 3.33	2.74 - 1.39	0.92 - 0.39	≤0.35
Market share	58.38	24.36	12.39	3.87	1.00
<b>ALL OTHER CURRENCY PAIRS</b>					
Ranges held	≥6.58	6.31 - 3.09	1.76 - 1.06	1.00 - 0.50	≤0.49
Market share	59.29	26.67	7.93	5.02	1.11

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 2007

Millions of U.S. Dollars

### AVERAGE DAILY VOLUME

<b>Instrument</b>	<b>Current Amount Reported</b>	<b>Dollar Change over Previous Year</b>	<b>Percentage Change over Previous Year</b>
Spot transactions	370,274	123,956	50.3
Outright forwards	90,171	7,728	9.4
Foreign exchange swaps	191,412	32,259	20.3
OTC foreign exchange options	48,965	3,183	7.0
<b>Total</b>	<b>700,822</b>	<b>167,126</b>	<b>31.3</b>

### TOTAL MONTHLY VOLUME

<b>Instrument</b>	<b>Current Amount Reported</b>	<b>Dollar Change over Previous Year</b>	<b>Percentage Change over Previous Year</b>
Spot transactions	8,516,329	3,097,422	57.2
Outright forwards	2,074,046	260,325	14.4
Foreign exchange swaps	4,402,499	901,110	25.7
OTC foreign exchange options	1,126,217	119,050	11.8
<b>Total</b>	<b>16,119,091</b>	<b>4,377,907</b>	<b>37.3</b>

Note: The lower table reports notional amounts of total monthly volume adjusted for double reporting of trades between reporting dealers; there were twenty-two trading days in October 2006 and twenty-three in October 2007.

**2a. SPOT TRANSACTIONS, Average Daily Volume, October 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	17,729	62,849	27,108	5,881	113,567
Japanese yen	9,513	28,724	13,365	2,017	53,619
British pound	5,280	19,452	12,715	2,470	39,917
Canadian dollar	4,525	10,102	6,111	2,377	23,115
Swiss franc	3,108	10,620	6,550	742	21,020
Australian dollar	2,983	9,021	6,173	1,171	19,348
Argentine peso	33	32	31	11	107
Brazilian real	320	626	557	251	1,754
Chilean peso	200	401	178	64	843
Mexican peso	2,005	4,908	1,698	647	9,258
All other currencies	3,032	6,542	6,324	2,664	18,562
<b>EURO VERSUS</b>					
Japanese yen	3,621	14,711	9,283	696	28,311
British pound	1,228	5,056	2,354	793	9,431
Swiss franc	1,778	6,416	2,999	567	11,760
<b>ALL OTHER CURRENCY PAIRS</b>	2,388	7,001	6,776	3,497	19,662
<b>Total<sup>a</sup></b>	<b>57,743</b>	<b>186,461</b>	<b>102,222</b>	<b>23,848</b>	<b>370,274</b>

**2b. OUTRIGHT FORWARDS, Average Daily Volume, October 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	1,671	3,264	11,268	3,535	19,738
Japanese yen	570	1,421	4,702	1,304	7,997
British pound	868	1,695	5,672	1,506	9,741
Canadian dollar	556	1,454	4,149	1,913	8,072
Swiss franc	320	731	2,224	614	3,889
Australian dollar	370	1,030	3,161	749	5,310
Argentine peso	66	103	80	30	279
Brazilian real	1,208	2,312	2,865	356	6,741
Chilean peso	318	633	177	43	1,171
Mexican peso	226	702	555	609	2,092
All other currencies	2,657	4,259	6,462	2,555	15,933
<b>EURO VERSUS</b>					
Japanese yen	100	356	400	190	1,046
British pound	66	377	400	391	1,234
Swiss franc	78	347	630	142	1,197
<b>ALL OTHER CURRENCY PAIRS</b>	286	912	2,286	2,247	5,731
<b>Total<sup>a</sup></b>	<b>9,360</b>	<b>19,596</b>	<b>45,031</b>	<b>16,184</b>	<b>90,171</b>

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.

<sup>a</sup>Figures may not sum to totals because of rounding.

**2c. FOREIGN EXCHANGE SWAPS, Average Daily Volume, October 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	8,937	24,952	11,986	3,908	49,783
Japanese yen	6,636	14,035	6,441	1,507	28,619
British pound	4,001	13,547	6,053	1,468	25,069
Canadian dollar	9,046	16,541	5,883	1,877	33,347
Swiss franc	2,066	5,562	1,978	260	9,866
Australian dollar	1,204	6,028	2,870	460	10,562
Argentine peso	7	7	1	0	15
Brazilian real	59	98	55	9	221
Chilean peso	35	57	12	1	105
Mexican peso	1,868	5,087	1,133	355	8,443
All other currencies	3,037	9,864	5,729	898	19,528
<b>EURO VERSUS</b>					
Japanese yen	18	107	172	90	387
British pound	22	204	296	498	1,020
Swiss franc	11	95	163	193	462
<b>ALL OTHER CURRENCY PAIRS</b>	443	1,143	1,676	723	3,985
<b>Total<sup>a</sup></b>	<b>37,390</b>	<b>97,327</b>	<b>44,448</b>	<b>12,247</b>	<b>191,412</b>

**2d. OTC FOREIGN EXCHANGE OPTIONS, Average Daily Volume, October 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	2,984	3,299	2,615	1,544	10,442
Japanese yen	2,752	2,811	2,925	378	8,866
British pound	1,165	640	1,946	291	4,042
Canadian dollar	834	1,387	1,174	549	3,944
Swiss franc	354	322	615	93	1,384
Australian dollar	703	800	1,092	183	2,778
Argentine peso	14	15	17	4	50
Brazilian real	558	555	1,251	59	2,423
Chilean peso	17	43	23	1	84
Mexican peso	470	439	450	95	1,454
All other currencies	807	968	1,551	1,450	4,776
<b>EURO VERSUS</b>					
Japanese yen	610	597	778	96	2,081
British pound	277	275	456	60	1,068
Swiss franc	208	135	127	14	484
<b>ALL OTHER CURRENCY PAIRS</b>	1,150	2,316	1,379	244	5,089
<b>Total<sup>a</sup></b>	<b>12,903</b>	<b>14,602</b>	<b>16,399</b>	<b>5,061</b>	<b>48,965</b>

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.

<sup>a</sup>Figures may not sum to totals because of rounding.

**2e. AVERAGE DAILY VOLUME, by Execution Method and Currency Pair, October 2007**

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

Currency Pair	Execution Method					Total	Total Number of Trades
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker		
<b>U.S. DOLLAR VERSUS</b>							
Euro	15,523	64,504	58,238	49,348	37,235	224,848	54,745
Japanese yen	11,677	34,890	26,904	23,155	21,946	118,572	39,006
British pound	5,643	20,648	23,747	26,974	13,066	90,078	20,937
Canadian dollar	10,575	20,660	20,155	13,584	18,462	83,436	16,972
Swiss franc	3,401	11,153	9,610	11,457	6,386	42,007	16,481
Australian dollar	2,970	10,332	10,859	11,892	7,201	43,254	16,001
Argentine peso	96	191	13	62	210	572	83
Brazilian real	1,497	4,033	646	1,384	5,726	13,286	1,162
Chilean peso	465	800	76	541	890	2,772	320
Mexican peso	2,490	7,449	6,455	1,798	7,623	25,815	4,406
All other currencies	7,966	23,801	9,923	11,245	15,393	68,328	15,895
<b>EURO VERSUS</b>							
Japanese yen	2,284	8,265	7,947	15,077	2,601	36,174	19,993
British pound	841	2,336	4,948	4,721	1,497	14,343	5,019
Swiss franc	1,091	2,898	4,741	5,001	2,247	15,978	5,973
<b>ALL OTHER CURRENCY PAIRS</b>	3,607	15,913	5,658	8,390	5,164	38,732	18,084
<b>Total<sup>a</sup></b>	<b>70,126</b>	<b>227,873</b>	<b>189,920</b>	<b>184,629</b>	<b>145,647</b>	<b>818,195</b>	<b>235,077</b>

**2f. AVERAGE DAILY VOLUME, by Execution Method, Instrument, and Counterparty, October 2007**

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

	Execution Method					Total	Total Number of Trades
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker		
<b>INSTRUMENT</b>							
Spot transactions	27,548	100,340	125,115	127,197	47,811	428,011	206,564
Outright forwards	7,729	37,778	5,748	29,069	19,205	99,529	19,921
Foreign exchange swaps	22,083	60,585	50,475	26,391	69,263	228,797	5,755
OTC foreign exchange options	12,768	29,171	8,582	1,973	9,368	61,862	2,838
<b>Total<sup>a</sup></b>	<b>70,128</b>	<b>227,874</b>	<b>189,920</b>	<b>184,630</b>	<b>145,647</b>	<b>818,199</b>	<b>235,078</b>
<b>COUNTERPARTY</b>							
Reporting dealers	70,128	0	82,872	26,453	55,312	234,765	50,035
Banks/other dealers	0	98,973	93,470	59,860	65,689	317,992	96,582
Other financial customers	0	93,076	6,306	88,425	20,294	208,101	76,390
Nonfinancial customers	0	35,824	7,272	9,893	4,352	57,341	12,072
<b>Total<sup>a</sup></b>	<b>70,128</b>	<b>227,873</b>	<b>189,920</b>	<b>184,631</b>	<b>145,647</b>	<b>818,199</b>	<b>235,079</b>

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.

<sup>a</sup>Figures may not sum to totals because of rounding.

**3a. SPOT TRANSACTIONS, Total Monthly Volume, October 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	407,765	1,445,527	623,494	135,274	2,612,060
Japanese yen	218,806	660,647	307,400	46,399	1,233,252
British pound	121,439	447,393	292,437	56,802	918,071
Canadian dollar	104,073	232,353	140,558	54,664	531,648
Swiss franc	71,478	244,265	150,643	17,066	483,452
Australian dollar	68,608	207,476	141,983	26,928	444,995
Argentine peso	760	728	724	245	2,457
Brazilian real	7,370	14,388	12,818	5,768	40,344
Chilean peso	4,598	9,231	4,097	1,462	19,388
Mexican peso	46,126	112,887	39,050	14,886	212,949
All other currencies	69,733	150,474	145,451	61,263	426,921
<b>EURO VERSUS</b>					
Japanese yen	83,292	338,364	213,513	16,016	651,185
British pound	28,245	116,287	54,138	18,238	216,908
Swiss franc	40,888	147,576	68,976	13,041	270,481
<b>ALL OTHER CURRENCY PAIRS</b>	54,921	161,031	155,845	80,421	452,218
<b>Total<sup>a</sup></b>	<b>1,328,102</b>	<b>4,288,627</b>	<b>2,351,127</b>	<b>548,473</b>	<b>8,516,329</b>

**3b. OUTRIGHT FORWARDS, Total Monthly Volume, October 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	38,425	75,080	259,163	81,303	453,971
Japanese yen	13,107	32,693	108,156	30,003	183,959
British pound	19,970	38,982	130,448	34,632	224,032
Canadian dollar	12,788	33,438	95,429	44,001	185,656
Swiss franc	7,371	16,822	51,160	14,128	89,481
Australian dollar	8,506	23,689	72,702	17,233	122,130
Argentine peso	1,527	2,377	1,849	690	6,443
Brazilian real	27,793	53,182	65,896	8,182	155,053
Chilean peso	7,316	14,548	4,067	995	26,926
Mexican peso	5,208	16,149	12,760	14,014	48,131
All other currencies	61,108	97,955	148,635	58,775	366,473
<b>EURO VERSUS</b>					
Japanese yen	2,297	8,193	9,207	4,359	24,056
British pound	1,508	8,668	9,211	9,000	28,387
Swiss franc	1,788	7,990	14,490	3,261	27,529
<b>ALL OTHER CURRENCY PAIRS</b>	6,572	20,981	52,580	51,686	131,819
<b>Total<sup>a</sup></b>	<b>215,284</b>	<b>450,747</b>	<b>1,035,753</b>	<b>372,262</b>	<b>2,074,046</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.

**3c. FOREIGN EXCHANGE SWAPS, Total Monthly Volume, October 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	205,548	573,904	275,685	89,873	1,145,010
Japanese yen	152,628	322,815	148,136	34,651	658,230
British pound	92,015	311,572	139,219	33,762	576,568
Canadian dollar	208,052	380,451	135,298	43,181	766,982
Swiss franc	47,512	127,926	45,498	5,991	226,927
Australian dollar	27,686	138,639	66,002	10,582	242,909
Argentine peso	163	172	20	4	359
Brazilian real	1,367	2,248	1,276	202	5,093
Chilean peso	803	1,308	286	12	2,409
Mexican peso	42,962	117,009	26,060	8,173	194,204
All other currencies	69,840	226,875	131,770	20,658	449,143
<b>EURO VERSUS</b>					
Japanese yen	417	2,457	3,965	2,070	8,909
British pound	505	4,702	6,802	11,451	23,460
Swiss franc	253	2,192	3,747	4,448	10,640
<b>ALL OTHER CURRENCY PAIRS</b>	10,198	26,286	38,540	16,632	91,656
<b>Total<sup>a</sup></b>	<b>859,949</b>	<b>2,238,556</b>	<b>1,022,304</b>	<b>281,690</b>	<b>4,402,499</b>

**3d. OTC FOREIGN EXCHANGE OPTIONS, Total Monthly Volume, October 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	68,637	75,881	60,135	35,519	240,172
Japanese yen	63,292	64,661	67,285	8,694	203,932
British pound	26,792	14,715	44,758	6,691	92,956
Canadian dollar	19,173	31,901	27,001	12,630	90,705
Swiss franc	8,131	7,407	14,154	2,145	31,837
Australian dollar	16,164	18,410	25,112	4,206	63,892
Argentine peso	318	352	394	83	1,147
Brazilian real	12,840	12,772	28,777	1,356	55,745
Chilean peso	399	979	529	23	1,930
Mexican peso	10,812	10,105	10,341	2,174	33,432
All other currencies	18,561	22,258	35,663	33,357	109,839
<b>EURO VERSUS</b>					
Japanese yen	14,037	13,720	17,897	2,215	47,869
British pound	6,363	6,335	10,489	1,373	24,560
Swiss franc	4,795	3,113	2,910	333	11,151
<b>ALL OTHER CURRENCY PAIRS</b>	26,446	53,270	31,714	5,620	117,050
<b>Total<sup>a</sup></b>	<b>296,760</b>	<b>335,879</b>	<b>377,159</b>	<b>116,419</b>	<b>1,126,217</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.

**3e. TOTAL MONTHLY VOLUME, by Execution Method and Currency Pair, October 2007**

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

Currency Pair	Execution Method					Total	Total Number of Trades
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker		
<b>U.S. DOLLAR VERSUS</b>							
Euro	357,038	1,483,595	1,339,484	1,135,008	856,396	5,171,521	1,259,138
Japanese yen	268,582	802,460	618,795	532,572	504,751	2,727,160	897,145
British pound	129,788	474,901	546,171	620,406	300,524	2,071,790	481,557
Canadian dollar	243,221	475,171	463,554	312,441	424,635	1,919,022	390,357
Swiss franc	78,221	256,512	221,029	263,502	146,877	966,141	379,062
Australian dollar	68,315	237,633	249,752	273,517	165,616	994,833	368,023
Argentine peso	2,208	4,398	292	1,429	4,831	13,158	1,898
Brazilian real	34,431	92,770	14,847	31,825	131,709	305,582	26,718
Chilean peso	10,692	18,401	1,744	12,447	20,468	63,752	7,370
Mexican peso	57,278	171,332	148,474	41,356	175,330	593,770	101,338
All other currencies	183,229	547,429	228,227	258,641	354,045	1,571,571	365,589
<b>EURO VERSUS</b>							
Japanese yen	52,529	190,104	182,789	346,771	59,821	832,014	459,850
British pound	19,339	53,730	113,810	108,588	34,432	329,899	115,444
Swiss franc	25,100	66,649	109,047	115,022	51,683	367,501	137,368
<b>ALL OTHER CURRENCY PAIRS</b>							
	82,972	366,001	130,138	192,981	118,761	890,853	415,943
<b>Total<sup>a</sup></b>	<b>1,612,943</b>	<b>5,241,086</b>	<b>4,368,153</b>	<b>4,246,506</b>	<b>3,349,879</b>	<b>18,818,567</b>	<b>5,406,800</b>

**3f. TOTAL MONTHLY VOLUME, by Execution Method, Instrument, and Counterparty, October 2007**

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

	Execution Method					Total	Total Number of Trades
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker		
<b>INSTRUMENT</b>							
Spot transactions	633,613	2,307,820	2,877,643	2,925,526	1,099,649	9,844,251	4,750,982
Outright forwards	177,757	868,888	132,194	668,597	441,711	2,289,147	458,175
Foreign exchange swaps	507,908	1,393,446	1,160,925	606,996	1,593,050	5,262,325	132,374
OTC foreign exchange options	293,666	670,928	197,394	45,389	215,470	1,422,847	65,267
<b>Total<sup>a</sup></b>	<b>1,612,944</b>	<b>5,241,082</b>	<b>4,368,156</b>	<b>4,246,508</b>	<b>3,349,880</b>	<b>18,818,570</b>	<b>5,406,798</b>
<b>COUNTERPARTY</b>							
Reporting dealers	1,612,942	0	1,906,058	608,426	1,272,165	5,399,591	1,150,802
Banks/other dealers	0	2,276,371	2,149,803	1,376,775	1,510,857	7,313,806	2,221,380
Other financial customers	0	2,140,755	145,041	2,033,777	466,771	4,786,344	1,756,969
Nonfinancial customers	0	823,960	167,254	227,530	100,086	1,318,830	277,646
<b>Total<sup>a</sup></b>	<b>1,612,942</b>	<b>5,241,086</b>	<b>4,368,156</b>	<b>4,246,508</b>	<b>3,349,879</b>	<b>18,818,571</b>	<b>5,406,797</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.

**4a. OUTRIGHT FORWARDS, Total Monthly Volume by Maturity, October 2007**

Millions of U.S. Dollars

Currency Pair	Maturity		
	Up to One Month	One Month to One Year	More Than One Year
<b>U.S. DOLLAR VERSUS</b>			
Euro	220,336	269,242	2,800
Japanese yen	106,517	88,434	2,100
British pound	137,688	105,159	1,144
Canadian dollar	116,332	79,820	2,278
Swiss franc	40,253	54,808	1,782
Australian dollar	72,910	56,880	833
Argentine peso	2,666	4,611	684
Brazilian real	130,646	50,956	1,239
Chilean peso	17,705	16,105	422
Mexican peso	25,524	27,290	509
All other currencies	204,023	208,218	15,325
<b>EURO VERSUS</b>			
Japanese yen	14,818	11,507	13
British pound	21,468	8,264	154
Swiss franc	18,811	10,417	82
<b>ALL OTHER CURRENCY PAIRS</b>	84,952	52,047	1,382
<b>Total<sup>a</sup></b>	<b>1,214,649</b>	<b>1,043,758</b>	<b>30,747</b>

**4b. FOREIGN EXCHANGE SWAPS, Total Monthly Volume by Maturity, October 2007**

Millions of U.S. Dollars

Currency Pair	Maturity		
	Up to One Month	One Month to One Year	More Than One Year
<b>U.S. DOLLAR VERSUS</b>			
Euro	1,003,401	341,693	5,449
Japanese yen	619,509	186,382	4,957
British pound	520,353	147,126	1,092
Canadian dollar	825,208	144,512	5,299
Swiss franc	213,617	60,456	353
Australian dollar	221,931	47,748	904
Argentine peso	364	156	0
Brazilian real	2,641	3,695	120
Chilean peso	2,012	1,177	22
Mexican peso	195,776	34,945	6,434
All other currencies	414,476	98,739	5,756
<b>EURO VERSUS</b>			
Japanese yen	6,757	2,511	51
British pound	15,698	8,234	28
Swiss franc	7,724	3,162	6
<b>ALL OTHER CURRENCY PAIRS</b>	66,342	35,103	405
<b>Total<sup>a</sup></b>	<b>4,115,809</b>	<b>1,115,639</b>	<b>30,876</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.

**4c. OTC FOREIGN EXCHANGE OPTIONS, Total Monthly Volume by Maturity, October 2007**

Millions of U.S. Dollars

Currency Pair	Maturity		
	Up to One Month	One to Six Months	More Than Six Months
<b>U.S. DOLLAR VERSUS</b>			
Euro	108,117	126,493	74,185
Japanese yen	90,186	100,950	76,075
British pound	52,752	51,477	15,508
Canadian dollar	44,569	39,505	25,796
Swiss franc	18,324	15,576	6,058
Australian dollar	39,979	30,099	9,965
Argentine peso	403	353	708
Brazilian real	18,269	34,134	16,172
Chilean peso	504	1,581	239
Mexican peso	11,439	23,702	9,095
All other currencies	25,484	78,213	24,694
<b>EURO VERSUS</b>			
Japanese yen	31,191	23,606	7,096
British pound	18,306	9,958	2,657
Swiss franc	4,523	7,563	3,851
<b>ALL OTHER CURRENCY PAIRS</b>	37,054	59,003	47,432
<b>Total<sup>a</sup></b>	<b>501,100</b>	<b>602,213</b>	<b>319,531</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.

## 1. TOTAL FOREIGN EXCHANGE VOLUME, April 2007

Millions of U.S. Dollars

### AVERAGE DAILY VOLUME

<b>Instrument</b>	<b>Current Amount Reported</b>	<b>Dollar Change over Previous Year</b>	<b>Percentage Change over Previous Year</b>
Spot transactions	273,961	-2,090	-0.8
Outright forwards	101,079	5,455	5.4
Foreign exchange swaps	189,347	31,837	16.8
OTC foreign exchange options	53,801	5,707	10.6
<b>Total</b>	<b>618,188</b>	<b>40,909</b>	<b>6.6</b>

### TOTAL MONTHLY VOLUME

<b>Instrument</b>	<b>Current Amount Reported</b>	<b>Dollar Change over Previous Year</b>	<b>Percentage Change over Previous Year</b>
Spot transactions	5,753,117	232,101	4.0
Outright forwards	2,122,667	210,187	9.9
Foreign exchange swaps	3,976,256	826,059	20.8
OTC foreign exchange options	1,129,875	167,993	14.9
<b>Total</b>	<b>12,981,915</b>	<b>1,436,340</b>	<b>11.1</b>

Note: The lower table reports notional amounts of total monthly volume adjusted for double reporting of trades between reporting dealers; there were twenty trading days in April 2006 and twenty-one in April 2007.

**2a. SPOT TRANSACTIONS, Average Daily Volume, April 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	14,057	42,494	22,689	5,582	84,822
Japanese yen	7,030	18,022	11,366	2,648	39,066
British pound	5,529	15,763	10,313	2,005	33,610
Canadian dollar	3,391	6,536	3,592	1,852	15,371
Swiss franc	2,598	7,352	4,780	843	15,573
Australian dollar	1,986	5,268	3,230	604	11,088
Argentine peso	38	37	58	10	143
Brazilian real	268	505	535	154	1,462
Chilean peso	178	161	241	43	623
Mexican peso	1,804	4,184	1,531	1,043	8,562
All other currencies	2,293	5,113	6,395	2,425	16,226
<b>EURO VERSUS</b>					
Japanese yen	1,932	8,115	4,366	521	14,934
British pound	1,270	3,910	1,622	747	7,549
Swiss franc	1,299	4,100	2,238	454	8,091
<b>ALL OTHER CURRENCY PAIRS</b>	2,125	5,144	5,008	4,564	16,841
<b>Total<sup>a</sup></b>	<b>45,798</b>	<b>126,704</b>	<b>77,964</b>	<b>23,495</b>	<b>273,961</b>

**2b. OUTRIGHT FORWARDS, Average Daily Volume, April 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	1,639	4,451	15,491	5,069	26,650
Japanese yen	752	3,421	7,463	2,240	13,876
British pound	787	2,268	5,331	1,909	10,295
Canadian dollar	335	1,094	2,996	1,846	6,271
Swiss franc	313	809	1,915	803	3,840
Australian dollar	456	1,289	3,001	657	5,403
Argentine peso	64	104	65	24	257
Brazilian real	850	1,935	1,825	369	4,979
Chilean peso	199	473	131	40	843
Mexican peso	306	896	724	845	2,771
All other currencies	1,562	3,734	6,371	2,479	14,146
<b>EURO VERSUS</b>					
Japanese yen	214	538	788	478	2,018
British pound	55	203	350	677	1,285
Swiss franc	63	189	314	370	936
<b>ALL OTHER CURRENCY PAIRS</b>	437	1,391	2,883	2,798	7,509
<b>Total<sup>a</sup></b>	<b>8,032</b>	<b>22,795</b>	<b>49,648</b>	<b>20,604</b>	<b>101,079</b>

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-one trading days in April.

<sup>a</sup>Figures may not sum to totals because of rounding.

**2c. FOREIGN EXCHANGE SWAPS, Average Daily Volume, April 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	7,215	26,163	14,330	3,187	50,895
Japanese yen	5,977	17,111	7,349	1,433	31,870
British pound	3,520	14,669	7,752	1,152	27,093
Canadian dollar	5,765	11,973	5,087	1,760	24,585
Swiss franc	2,044	6,707	2,690	286	11,727
Australian dollar	1,523	7,700	2,773	281	12,277
Argentine peso	5	8	4	1	18
Brazilian real	51	101	118	14	284
Chilean peso	29	49	4	0	82
Mexican peso	2,141	4,815	1,672	303	8,931
All other currencies	2,840	8,531	4,047	635	16,053
<b>EURO VERSUS</b>					
Japanese yen	62	128	274	92	556
British pound	60	66	549	442	1,117
Swiss franc	28	46	55	97	226
<b>ALL OTHER CURRENCY PAIRS</b>	392	750	2,096	395	3,633
<b>Total<sup>a</sup></b>	<b>31,652</b>	<b>98,817</b>	<b>48,800</b>	<b>10,078</b>	<b>189,347</b>

**2d. OTC FOREIGN EXCHANGE OPTIONS, Average Daily Volume, April 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	2,735	3,621	3,159	1,142	10,657
Japanese yen	2,526	2,900	2,822	469	8,717
British pound	1,623	1,846	3,102	552	7,123
Canadian dollar	995	1,582	1,493	382	4,452
Swiss franc	315	330	379	157	1,181
Australian dollar	529	723	1,050	290	2,592
Argentine peso	7	5	6	22	40
Brazilian real	434	579	495	67	1,575
Chilean peso	8	9	3	3	23
Mexican peso	337	838	515	143	1,833
All other currencies	568	808	1,353	2,403	5,132
<b>EURO VERSUS</b>					
Japanese yen	1,204	774	2,197	93	4,268
British pound	210	401	516	78	1,205
Swiss franc	137	238	591	159	1,125
<b>ALL OTHER CURRENCY PAIRS</b>	843	1,185	1,517	333	3,878
<b>Total<sup>a</sup></b>	<b>12,471</b>	<b>15,839</b>	<b>19,198</b>	<b>6,293</b>	<b>53,801</b>

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-one trading days in April.

<sup>a</sup>Figures may not sum to totals because of rounding.

**2e. AVERAGE DAILY VOLUME, by Execution Method and Currency Pair, April 2007**

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

Currency Pair	Execution Method					Total	Total Number of Trades
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker		
<b>U.S. DOLLAR VERSUS</b>							
Euro	13,319	61,033	48,255	43,269	32,791	198,667	46,511
Japanese yen	9,357	32,442	22,767	26,541	18,706	109,813	30,766
British pound	6,551	24,549	20,100	22,808	15,570	89,578	20,937
Canadian dollar	6,185	18,238	16,019	8,619	12,102	61,163	12,713
Swiss franc	2,939	10,955	9,313	8,500	5,880	37,587	13,111
Australian dollar	2,686	10,924	8,706	7,098	6,440	35,854	9,424
Argentine peso	106	195	7	81	181	570	72
Brazilian real	1,408	2,957	427	785	4,324	9,901	1,164
Chilean peso	394	703	38	317	532	1,984	260
Mexican peso	1,946	7,008	6,170	2,103	9,452	26,679	3,564
All other currencies	5,436	20,160	9,647	9,544	14,030	58,817	12,933
<b>EURO VERSUS</b>							
Japanese yen	3,046	9,395	4,742	5,719	2,280	25,182	11,299
British pound	638	3,496	4,008	3,017	1,590	12,749	4,535
Swiss franc	593	2,609	3,290	3,785	1,628	11,905	4,146
<b>ALL OTHER CURRENCY PAIRS</b>							
	3,516	13,295	4,611	9,483	4,749	35,654	17,977
<b>Total<sup>a</sup></b>	<b>58,120</b>	<b>217,959</b>	<b>158,100</b>	<b>151,669</b>	<b>130,255</b>	<b>716,103</b>	<b>189,412</b>

**2f. AVERAGE DAILY VOLUME, by Execution Method, Instrument, and Counterparty, April 2007**

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

	Execution Method					Total	Total Number of Trades
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker		
<b>INSTRUMENT</b>							
Spot transactions	22,989	84,525	96,280	78,509	37,443	319,746	157,944
Outright forwards	4,501	44,749	8,183	31,288	20,382	109,103	23,043
Foreign exchange swaps	17,149	54,812	46,879	37,527	64,624	220,991	5,711
OTC foreign exchange options	13,483	33,875	6,759	4,346	7,806	66,269	2,716
<b>Total<sup>a</sup></b>	<b>58,122</b>	<b>217,961</b>	<b>158,101</b>	<b>151,670</b>	<b>130,255</b>	<b>716,109</b>	<b>189,414</b>
<b>COUNTERPARTY</b>							
Reporting dealers	58,122	0	66,559	24,644	46,553	195,878	36,974
Banks/other dealers	0	78,044	77,873	51,473	56,764	264,154	74,363
Other financial customers	0	94,094	8,512	67,988	25,012	195,606	65,401
Nonfinancial customers	0	45,824	5,158	7,566	1,926	60,474	12,676
<b>Total<sup>a</sup></b>	<b>58,122</b>	<b>217,962</b>	<b>158,102</b>	<b>151,671</b>	<b>130,255</b>	<b>716,112</b>	<b>189,414</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.

**3a. SPOT TRANSACTIONS, Total Monthly Volume, April 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	295,190	892,368	476,469	117,212	1,781,239
Japanese yen	147,623	378,455	238,696	55,616	820,390
British pound	116,104	331,028	216,569	42,109	705,810
Canadian dollar	71,218	137,257	75,439	38,896	322,810
Swiss franc	54,566	154,388	100,384	17,703	327,041
Australian dollar	41,710	110,638	67,825	12,689	232,862
Argentine peso	791	778	1,210	211	2,990
Brazilian real	5,628	10,595	11,225	3,234	30,682
Chilean peso	3,729	3,375	5,052	903	13,059
Mexican peso	37,885	87,857	32,159	21,912	179,813
All other currencies	48,146	107,377	134,291	50,933	340,747
<b>EURO VERSUS</b>					
Japanese yen	40,565	170,412	91,679	10,936	313,592
British pound	26,673	82,120	34,056	15,679	158,528
Swiss franc	27,277	86,106	46,988	9,528	169,899
<b>ALL OTHER CURRENCY PAIRS</b>	44,623	108,015	105,170	95,847	353,655
<b>Total<sup>a</sup></b>	<b>961,728</b>	<b>2,660,769</b>	<b>1,637,212</b>	<b>493,408</b>	<b>5,753,117</b>

**3b. OUTRIGHT FORWARDS, Total Monthly Volume, April 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	34,424	93,479	325,317	106,443	559,663
Japanese yen	15,799	71,833	156,715	47,049	291,396
British pound	16,535	47,632	111,941	40,085	216,193
Canadian dollar	7,036	22,973	62,909	38,762	131,680
Swiss franc	6,567	16,998	40,205	16,858	80,628
Australian dollar	9,584	27,072	63,030	13,800	113,486
Argentine peso	1,352	2,177	1,370	505	5,404
Brazilian real	17,855	40,642	38,317	7,751	104,565
Chilean peso	4,178	9,937	2,755	843	17,713
Mexican peso	6,422	18,812	15,196	17,754	58,184
All other currencies	32,807	78,410	133,781	52,065	297,063
<b>EURO VERSUS</b>					
Japanese yen	4,486	11,299	16,555	10,032	42,372
British pound	1,147	4,272	7,347	14,212	26,978
Swiss franc	1,323	3,978	6,599	7,764	19,664
<b>ALL OTHER CURRENCY PAIRS</b>	9,175	29,204	60,534	58,765	157,678
<b>Total<sup>a</sup></b>	<b>168,690</b>	<b>478,718</b>	<b>1,042,571</b>	<b>432,688</b>	<b>2,122,667</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.

**3c. FOREIGN EXCHANGE SWAPS, Total Monthly Volume, April 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	151,514	549,424	300,938	66,933	1,068,809
Japanese yen	125,524	359,330	154,337	30,096	669,287
British pound	73,930	308,044	162,788	24,185	568,947
Canadian dollar	121,059	251,428	106,817	36,965	516,269
Swiss franc	42,915	140,848	56,499	5,997	246,259
Australian dollar	31,986	161,695	58,240	5,906	257,827
Argentine peso	97	159	79	11	346
Brazilian real	1,067	2,119	2,483	297	5,966
Chilean peso	614	1,039	78	0	1,731
Mexican peso	44,951	101,108	35,103	6,368	187,530
All other currencies	59,643	179,142	84,980	13,345	337,110
<b>EURO VERSUS</b>					
Japanese yen	1,305	2,678	5,753	1,931	11,667
British pound	1,264	1,378	11,538	9,275	23,455
Swiss franc	598	963	1,158	2,040	4,759
<b>ALL OTHER CURRENCY PAIRS</b>	8,236	15,741	44,014	8,303	76,294
<b>Total<sup>a</sup></b>	<b>664,703</b>	<b>2,075,096</b>	<b>1,024,805</b>	<b>211,652</b>	<b>3,976,256</b>

**3d. OTC FOREIGN EXCHANGE OPTIONS, Total Monthly Volume, April 2007**

Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
<b>U.S. DOLLAR VERSUS</b>					
Euro	57,442	76,048	66,329	23,981	223,800
Japanese yen	53,054	60,898	59,260	9,849	183,061
British pound	34,083	38,776	65,133	11,593	149,585
Canadian dollar	20,892	33,230	31,358	8,026	93,506
Swiss franc	6,612	6,925	7,956	3,295	24,788
Australian dollar	11,101	15,183	22,058	6,091	54,433
Argentine peso	149	107	126	468	850
Brazilian real	9,123	12,160	10,386	1,413	33,082
Chilean peso	171	187	66	66	490
Mexican peso	7,070	17,589	10,814	3,010	38,483
All other currencies	11,931	16,972	28,421	50,468	107,792
<b>EURO VERSUS</b>					
Japanese yen	25,288	16,263	46,131	1,950	89,632
British pound	4,416	8,416	10,837	1,632	25,301
Swiss franc	2,880	4,992	12,421	3,337	23,630
<b>ALL OTHER CURRENCY PAIRS</b>	17,703	24,886	31,855	6,998	81,442
<b>Total<sup>a</sup></b>	<b>261,915</b>	<b>332,632</b>	<b>403,151</b>	<b>132,177</b>	<b>1,129,875</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.

**3e. TOTAL MONTHLY VOLUME, by Execution Method and Currency Pair, April 2007**

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

Currency Pair	Execution Method					Total	Total Number of Trades
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker		
<b>U.S. DOLLAR VERSUS</b>							
Euro	279,693	1,281,689	1,013,364	908,651	688,619	4,172,016	976,734
Japanese yen	196,507	681,281	478,113	557,353	392,824	2,306,078	646,082
British pound	137,571	515,539	422,094	478,968	326,967	1,881,139	439,683
Canadian dollar	129,886	382,996	336,401	180,998	254,136	1,284,417	266,977
Swiss franc	61,725	230,050	195,573	178,495	123,482	789,325	275,329
Australian dollar	56,413	229,410	182,821	149,057	135,235	752,936	197,913
Argentine peso	2,232	4,094	140	1,698	3,800	11,964	1,512
Brazilian real	29,575	62,106	8,968	16,494	90,805	207,948	24,445
Chilean peso	8,270	14,760	800	6,666	11,173	41,669	5,469
Mexican peso	40,876	147,171	129,578	44,168	198,493	560,286	74,838
All other currencies	114,157	423,368	202,589	200,434	294,637	1,235,185	271,589
<b>EURO VERSUS</b>							
Japanese yen	63,975	197,304	99,592	120,101	47,880	528,852	237,282
British pound	13,391	73,421	84,170	63,354	33,386	267,722	95,239
Swiss franc	12,452	54,789	69,091	79,479	34,190	250,001	87,074
<b>ALL OTHER CURRENCY PAIRS</b>							
	73,843	279,203	96,837	199,153	99,729	748,765	377,518
<b>Total<sup>a</sup></b>	<b>1,220,566</b>	<b>4,577,181</b>	<b>3,320,131</b>	<b>3,185,069</b>	<b>2,735,356</b>	<b>15,038,303</b>	<b>3,977,684</b>

**3f. TOTAL MONTHLY VOLUME, by Execution Method, Instrument, and Counterparty, April 2007**

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

	Execution Method					Total	Total Number of Trades
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker		
<b>INSTRUMENT</b>							
Spot transactions	482,771	1,775,022	2,021,888	1,648,680	786,303	6,714,664	3,316,824
Outright forwards	94,524	939,730	171,846	657,050	428,028	2,291,178	483,902
Foreign exchange swaps	360,126	1,151,047	984,462	788,071	1,357,110	4,640,816	119,923
OTC foreign exchange options	283,146	711,384	141,931	91,275	163,919	1,391,655	57,039
<b>Total<sup>a</sup></b>	<b>1,220,567</b>	<b>4,577,183</b>	<b>3,320,127</b>	<b>3,185,076</b>	<b>2,735,360</b>	<b>15,038,313</b>	<b>3,977,688</b>
<b>COUNTERPARTY</b>							
Reporting dealers	1,220,564	0	1,397,731	517,524	977,616	4,113,435	776,450
Banks/other dealers	0	1,638,914	1,635,327	1,080,927	1,192,045	5,547,213	1,561,628
Other financial customers	0	1,975,973	178,761	1,427,748	525,262	4,107,744	1,373,418
Nonfinancial customers	0	962,298	108,309	158,876	40,440	1,269,923	266,190
<b>Total<sup>a</sup></b>	<b>1,220,564</b>	<b>4,577,185</b>	<b>3,320,128</b>	<b>3,185,075</b>	<b>2,735,363</b>	<b>15,038,315</b>	<b>3,977,686</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.

**4a. OUTRIGHT FORWARDS, Total Monthly Volume by Maturity, April 2007**

Millions of U.S. Dollars

Currency Pair	Maturity		
	Up to One Month	One Month to One Year	More Than One Year
<b>U.S. DOLLAR VERSUS</b>			
Euro	386,524	203,157	4,385
Japanese yen	196,944	108,231	2,005
British pound	118,844	112,537	1,338
Canadian dollar	70,901	65,085	2,715
Swiss franc	53,783	33,199	198
Australian dollar	67,181	55,432	442
Argentine peso	2,389	3,501	859
Brazilian real	84,273	36,241	1,899
Chilean peso	11,847	10,028	11
Mexican peso	38,517	25,120	955
All other currencies	165,358	156,865	7,640
<b>EURO VERSUS</b>			
Japanese yen	32,320	14,166	356
British pound	19,546	8,401	164
Swiss franc	15,008	5,271	697
<b>ALL OTHER CURRENCY PAIRS</b>	108,176	58,304	362
<b>Total<sup>a</sup></b>	<b>1,371,611</b>	<b>895,538</b>	<b>24,026</b>

**4b. FOREIGN EXCHANGE SWAPS, Total Monthly Volume by Maturity, April 2007**

Millions of U.S. Dollars

Currency Pair	Maturity		
	Up to One Month	One Month to One Year	More Than One Year
<b>U.S. DOLLAR VERSUS</b>			
Euro	988,546	224,451	7,311
Japanese yen	668,638	118,039	8,118
British pound	508,587	132,738	1,537
Canadian dollar	546,469	87,626	3,216
Swiss franc	238,426	48,710	2,028
Australian dollar	244,959	44,184	657
Argentine peso	353	78	10
Brazilian real	2,771	4,222	37
Chilean peso	1,304	1,019	20
Mexican peso	195,655	32,218	4,590
All other currencies	326,487	67,699	2,552
<b>EURO VERSUS</b>			
Japanese yen	9,357	3,333	275
British pound	16,205	8,469	36
Swiss franc	3,865	860	630
<b>ALL OTHER CURRENCY PAIRS</b>	58,816	25,029	682
<b>Total<sup>a</sup></b>	<b>3,810,438</b>	<b>798,675</b>	<b>31,699</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.

**4c. OTC FOREIGN EXCHANGE OPTIONS, Total Monthly Volume by Maturity, April 2007**

Millions of U.S. Dollars

Currency Pair	Maturity		
	Up to One Month	One to Six Months	More Than Six Months
<b>U.S. DOLLAR VERSUS</b>			
Euro	123,547	129,831	27,846
Japanese yen	102,117	88,694	45,290
British pound	89,566	85,458	8,633
Canadian dollar	59,235	48,944	6,209
Swiss franc	14,723	13,044	3,626
Australian dollar	35,720	25,535	4,269
Argentine peso	50	429	520
Brazilian real	10,421	17,896	13,880
Chilean peso	155	458	47
Mexican peso	13,498	23,316	8,731
All other currencies	64,208	41,500	14,008
<b>EURO VERSUS</b>			
Japanese yen	42,497	62,665	9,745
British pound	20,938	7,191	1,578
Swiss franc	8,525	15,003	2,976
<b>ALL OTHER CURRENCY PAIRS</b>	38,999	45,227	14,910
<b>Total<sup>a</sup></b>	<b>624,199</b>	<b>605,191</b>	<b>162,268</b>

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

<sup>a</sup>Figures may not sum to totals because of rounding.



***The Foreign  
Exchange Committee***  
*2007 Annual Report*



*Membership  
and Meetings*

# Membership Report

## The Responsibilities of Membership

The Foreign Exchange Committee is a select group of individuals who have achieved stature within their own institutions and the marketplace. In joining the Committee, these individuals expand their focus beyond their own institutions to encompass the entire market. The various responsibilities of the Committee members are outlined in the Document of Organization, reprinted in this volume. Some important requirements for membership are explained below:

- Frequent face-to-face interaction is encouraged to maximize camaraderie and facilitate problem solving and crisis management. To accomplish this, members need to attend all Committee meetings; there are no alternate members and no provisions for conferencing to outside locations.
- The Committee seeks to improve market conditions and reduce risk by developing recommendations or other guidance for market participants. To ensure that the Committee is current on market problems and issues, members need to expeditiously alert the Committee to important developments that they might encounter during a day's activity.
- Each member must be an effective communicator and problem solver with a commitment to raise and, when possible, resolve market and industry issues. The Committee's sponsor, the Federal Reserve Bank of New York, views the Committee as an advisory group that identifies market-related problems, suggests solutions or next steps, and provides feedback on any agreed-upon actions. Members need to meet these expectations.
- Once the Committee takes an action at a meeting, members share and disseminate information, best practices, or related recommendations throughout their own institutions as well as among industry groups and organizations. The Committee's ability to solve problems and gather support for its actions and recommendations depends on the strong link that members have with each other, with their sponsor (the Federal Reserve Bank of New York), and with their institutions and other participants in the foreign exchange market.
- Finally, all members should participate in projects and volunteer their organizations' resources when needed.

## 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 necessary, the composition of the Committee. The Membership Subcommittee is the only standing subgroup of the Committee; other subgroups function on a temporary basis and are formed to address specific issues or concerns.

The Federal Reserve representative on the Committee chairs the Membership Subcommittee. Subcommittee members (see the next page for 2007 and 2008 membership) include the Committee's Chair as well as several longstanding 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 meeting, 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 institutions, such as retirement, resignation, reassignment, or institutional merger activity.

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

Members whose terms are expiring are invited to renew for an additional four-year term. The Committee's core group of longstanding 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 within their

organization who might provide the Committee with more active and consistent support.

When discussing new members, the group 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 arena. The subcommittee considers individuals who have contacted the Committee directly. In addition, members of the Committee, the subcommittee, or other market participants may nominate an individual who they feel will benefit the Committee's mission.

The subcommittee also weighs the institutional composition of the Committee in its membership decisions on the theory that membership should reflect the overall organization of the actual market. During 2008, the Committee's membership will include individuals from commercial and investment banks and three 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 2007 and 2008 for the two existing working groups are identified below.

## Assignments, 2007 and 2008

### 2007

#### *Committee Chair*

Richard Mahoney

#### *Liaisons for Working Groups*

Chief Dealers  
Russell LaScala  
Sue Storey

#### *Operations Managers*

Peter Connolly  
Richard Rua

#### *Membership Subcommittee*

William Dudley (Chair)  
Jeff Feig  
Richard Mahoney  
Christiane Mandell  
Philip Newcomb  
Jamie Thorsen

#### *Risk Management and Compliance Subcommittee*

Peter Connolly  
Jamie Thorsen

### 2008

#### *Committee Chair*

Richard Mahoney

#### *Liaisons for Working Groups*

Chief Dealers  
Russell LaScala

#### *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

# Meetings, 2007 and 2008

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 the 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, 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. In 2007, Committee projects included discussions on issues surrounding the effect of rapidly developing technology on liquidity provision, market structure, and market resilience. Decisions on project-related work are made during the meetings.

## **2007**

January 4

February 15

March 22

May 10

June 7

September 6

October 4

November 8

## **2008**

January 10

February 7

March 13

May 8

June 5

September 4

October 2

November 6

# Member List, 2007

**Anthony Bisegna**

Senior Managing Director  
State Street Corporation  
One Lincoln Street  
Boston, Massachusetts 02111  
617-664-1190  
acbisegna@statestreet.com  
Term: 2007-2010

**Graham Broyd**

Managing Director  
RBS Greenwich Capital  
600 Steamboat Road  
Greenwich, Connecticut 06830  
203-618-6325  
graham.broyd@rbsgc.com  
Term: 2007-2010

**David Castle**

Head of Global Markets  
Standard Chartered Bank  
1 Madison Avenue, 3rd Floor  
New York, New York 10010  
212-667-0351  
david.castle@us.standardchartered.com  
Term: 2007-2010

**Peter Connolly**

Executive Vice President  
Wells Fargo  
1 Front Street, 20th Floor  
San Francisco, California 94111  
415-396-4591  
connolly@wellsfargo.com  
Term: 2006-2009

**Jeff Feig**

Managing Director  
Citigroup  
390 Greenwich Street, 5th Floor  
New York, New York 10013  
212-723-7618  
jeff.feig@citigroup.com  
Term: 2005-2008

**Richard Gladwin**

Global Head of Foreign Exchange  
Lehman Brothers  
25 Bank Street, 4th Floor  
London E14 5LE  
United Kingdom  
44-20-7102-9483  
richard.gladwin@lehman.com  
Term: 2007-2010

**Naoto Hirota**

General Manager and Treasurer  
The Bank of Tokyo-Mitsubishi UFJ  
1251 Avenue of the Americas  
New York, New York 10020-1104  
212-782-4995  
nhirota@us.mufg.jp  
Term: 2006-2009

**Jack Jeffery**

Chief Executive Officer  
ICAP  
2 Broadgate  
London EC2M 7UR  
United Kingdom  
44-20-7029-9075  
jjeffery@icap.com  
Term: 2007-2010

**Russell LaScala**

Managing Director  
Deutsche Bank  
60 Wall Street, 5th Floor  
New York, New York 10005  
212-250-4203  
russell.lascala@db.com  
Term: 2007-2010

**Michael Leibowitz**

Chief Executive Officer  
TFS Brokers  
East India House, 4th Floor  
117-119 Middlesex Street  
London E1 7JF  
United Kingdom  
44-20-7454-9422  
mleibowitz@tfsbrokers.com  
Term: 2007-2010

**Robert Lichten**

Managing Director  
JP Morgan Chase Bank  
270 Park Avenue, 6th Floor  
New York, New York 10017-2070  
212-834-3108  
robert.lichten@jpmorgan.com  
Term: 2007-2010

**Richard Mahoney**

Executive Vice President  
The Bank of New York  
32 Old Slip, 15th Floor  
New York, New York 10286  
212-804-2018  
rmahoney@bankofny.com  
Term: 2005-2008

**Christiane Mandell**

Managing Director  
Bank of America  
9 West 57th Street, 20th Floor  
New York, New York 10019  
212-548-2895  
christiane.mandell@bankofamerica.com  
Term: 2005-2008

**Frank Manganella**

Head of International Sales  
and Trading  
Handelsbanken  
875 3rd Avenue, 4th Floor  
New York, New York 10022  
212-326-5120  
frma05@handelsbanken.se  
Term: 2007-2010

**John Meyer**

Global Head of FX Derivatives  
UBS  
677 Washington Boulevard  
Stamford, Connecticut 06901  
203-719-7700  
john.meyer@ubs.com  
Term: 2007-2010

**Philip Newcomb**

Managing Director  
Morgan Stanley & Co, Inc.  
1585 Broadway  
New York, New York 10036  
212-761-2840  
philip.newcomb@morganstanley.com  
Term: 2005-2008

**Ivan Ritossa**

Barclays Capital  
5 The North Colonnade  
Canary Wharf  
London E14 4BB  
United Kingdom  
44-20-7773-8435  
ivan.ritossa@barcap.com  
Term: 2007-2010

**Richard Rua**

Executive Vice President  
Mellon Bank, N.A.  
1 Mellon Bank Center, Room 151-0400  
Pittsburgh, Pennsylvania 15258  
412-234-1474  
rua.ra@mellon.com  
Term: 2005-2008

**Susan Storey**

Managing Director  
CIBC World Markets  
161 Bay Street, BCE Place  
Toronto, Ontario M5J2S8  
Canada  
416-594-7167  
sue.storey@cibc.ca  
Term: 2007-2010

**Jamie Thorsen**

Executive Managing Director  
Bank of Montreal  
115 South LaSalle Street  
19th Floor West  
Chicago, Illinois 60603  
312-845-4107  
jamie.thorsen@bmo.com  
Term: 2007-2010

**Ashok Varadhan**

Managing Director  
Goldman Sachs & Co.  
85 Broad Street  
New York, New York 10004  
212-902-0564  
ashok.varadhan@gs.com  
Term: 2007-2010

**Benjamin Welsh**

Managing Director  
HSBC  
452 Fifth Avenue  
New York, New York 10018  
212-525-3773  
benjamin.welsh@us.hsbc.com  
Term: 2005-2008

**Federal Reserve Bank  
of New York (Ex Officio)****Mari Baca**

Executive Assistant  
Federal Reserve Bank of New York  
33 Liberty Street, 9th Floor  
New York, New York 10045  
212-720-1707  
mari.baca@ny.frb.org

**William Dudley**

Executive Vice President  
Federal Reserve Bank of New York  
33 Liberty Street, 9th Floor  
New York, New York 10045  
212-720-1751  
william.dudley@ny.frb.org

**Patricia Mosser**

Senior Vice President  
Federal Reserve Bank of New York  
33 Liberty Street, 9th Floor  
New York, New York 10045  
212-720-6416  
patricia.mosser@ny.frb.org

**Counsel****Michael Nelson**

Counsel and Vice President  
Federal Reserve Bank of New York  
33 Liberty Street, 7th Floor  
New York, New York 10045  
212-720-8194  
michael.nelson@ny.frb.org

# Member List, 2008

## **Shigeru Asai**

General Manager and Treasurer  
Bank of Tokyo-Mitsubishi UFJ  
1251 Avenue of the Americas  
New York, New York 10020  
212-782-4995  
sasai@us.mufg.jp  
Term: 2008-2011

## **Anthony Bisegna**

Senior Managing Director  
State Street Corporation  
1 Lincoln Street  
Boston, Massachusetts 02111  
617-664-1190  
acbisegna@statestreet.com  
Term: 2007-2010

## **Graham Broyd**

Managing Director  
RBS Greenwich Capital  
600 Steamboat Road  
Greenwich, Connecticut 06830  
203-618-6325  
graham.broyd@rbsgc.com  
Term: 2007-2010

## **David Castle**

Managing Director  
Standard Chartered Bank  
1 Madison Avenue  
New York, New York 10010  
212-667-0351  
david.castle@standardchartered.com  
Term: 2007-2010

## **Robert Catalanello**

Managing Director  
Calyon  
1301 Avenue of the Americas  
New York, New York 10019  
212-261-3705  
robert.catalanello@us.calyon.com  
Term: 2008-2011

## **Peter Connolly**

Executive Vice President  
Wells Fargo  
1 Front Street  
San Francisco, California 94111  
415-396-4591  
connolly@wellsfargo.com  
Term: 2006-2009

## **Jeff Feig**

Managing Director  
Citigroup  
390 Greenwich Street  
New York, New York 10013  
212-723-7618  
jeff.feig@citigroup.com  
Term: 2005-2008

## **Rodolfo Fischer**

Executive Vice President  
Banco Itau S.A.  
Av. Eng. Armando de Arruda Pereira  
São Paulo 04344-902  
Brazil  
55-11-5029-3780  
rfischer@itau.com.br  
Term: 2008-2011

## **Susan Gammage**

Executive Vice President  
Thomson Reuters  
3 Times Square  
New York, New York 10036  
646-223-5252  
susan.gammage@thomsonreuters.com  
Term: 2008-2011

## **Richard Gladwin**

Managing Director  
Lehman Brothers  
25 Bank Street  
London E14 5LE  
United Kingdom  
44-20-7102-9483  
richard.gladwin@lehman.com  
Term: 2007-2010

## **Russell LaScala**

Managing Director  
Deutsche Bank  
60 Wall Street  
New York, New York 10005  
212-250-4203  
russell.lascalas@db.com  
Term: 2007-2010

## **Michael Leibowitz**

Chief Executive Officer  
TFS Brokers  
East India House  
117-119 Middlesex Street  
London E1 7JF  
United Kingdom  
44-20-7198-1550  
mleibowitz@tfsbrokers.com  
Term: 2007-2010

## **Richard Mahoney**

Executive Vice President  
The Bank of New York  
32 Old Slip  
New York, New York 10286  
212-804-2018  
rich.mahoney@bnymellon.com  
Term: 2005-2008

## **Frank Manganella**

Principal  
Handelsbanken  
875 Third Avenue  
New York, New York 10022  
212-326-5120  
frma05@handelsbanken.se  
Term: 2007-2010

## **Stephen Mettler**

Managing Director  
Morgan Stanley & Co.  
1585 Broadway  
New York, New York 10036  
212-761-0807  
stephen.mettler@morganstanley.com  
Term: 2008-2011

**John Meyer**

Global Head of FX Derivatives  
UBS  
677 Washington Boulevard  
Stamford, Connecticut 06901  
203-719-7700  
john.meyer@ubs.com  
Term: 2007-2010

**John Nixon**

Executive Director  
ICAP North America  
Harborside Financial Center  
1100 Plaza Five  
Jersey City, New Jersey 07311  
212-815-9015  
john.nixon@us.icap.com  
Term: 2008-2011

**Dan O'Sullivan**

Managing Director  
Unicredit, Bayerische Hypo-  
und Vereinsbank AG  
Moor House, 120 London Wall  
London EC2Y 5ET  
United Kingdom  
44-20-7826-6767  
dan.o'sullivan@hvbeurope.com  
Term: 2008-2011

**Susan Storey**

Managing Director  
CIBC World Markets  
161 Bay Street, BCE Place  
Toronto, Ontario M5J 2S8  
Canada  
416-594-7167  
sue.storey@cibc.ca  
Term: 2007-2010

**Jamie Thorsen**

Executive Managing Director  
Bank of Montreal  
115 South LaSalle Street  
Chicago, Illinois 60603  
312-845-4107  
jamie.thorsen@bmo.com  
Term: 2007-2010

**Peter Tomozawa**

Managing Director  
Goldman Sachs & Co.  
1 New York Plaza  
New York, New York 10004  
212-902-4703  
peter.tomozawa@gs.com  
Term: 2008-2011

**Christopher Willcox**

Co-Head of Global Rates  
and Currency Trading  
JP Morgan Chase  
125 London Wall  
London EC2Y 5AJ  
United Kingdom  
44-20-7777-9695  
christopher.p.willcox@jpmorgan.com  
Term: 2008-2011

**Federal Reserve Bank  
of New York (Ex Officio)****Mari Baca**

Executive Assistant  
Federal Reserve Bank of New York  
33 Liberty Street, 9th Floor  
New York, New York 10045  
212-720-1707  
mari.baca@ny.frb.org

**William Dudley**

Executive Vice President  
Federal Reserve Bank of New York  
33 Liberty Street, 9th Floor  
New York, New York 10045  
212-720-1751  
william.dudley@ny.frb.org

**Patricia Mosser**

Senior Vice President  
Federal Reserve Bank of New York  
33 Liberty Street, 9th Floor  
New York, New York 10045  
212-720-6416  
patricia.mosser@ny.frb.org

**Counsel****Michael Nelson**

Counsel and Vice President  
Federal Reserve Bank of New York  
33 Liberty Street, 7th Floor  
New York, New York 10045  
212-720-8194  
michael.nelson@ny.frb.org



***The Foreign  
Exchange Committee  
2007 Annual Report***



*Reference  
Material*

# Document of Organization

A feasibility study recommending the creation of the Foreign Exchange Committee was first conducted in June 1978. The resulting document of organization represents the study's conclusions and has periodically been updated (most recently in January 1997) to reflect the Committee's evolution.

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

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

## The Committee Objectives Are

- to provide a forum for discussing technical issues in the foreign exchange and related international financial markets;
- to serve as a channel of communication between these markets and the Federal Reserve System and, where appropriate, to other official institutions within the United States and abroad;

- to enhance knowledge and understanding of the foreign exchange and related international financial markets, in practice and in theory;
- to foster improvements in the quality of risk management in these markets;
- to develop recommendations and prepare issue papers on specific market-related topics for circulation to market participants and their management; and
- to work closely with the Financial Markets Association–USA and other formally established organizations representing relevant financial markets.

## The Committee

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

- The Committee should consist of no more than thirty members.
- Institutions participating in the Committee should be chosen in consideration of: a) their participation in the foreign exchange market here and b) the size and general importance of the institution. Selection of participants should remain flexible to reflect changes as they occur in the foreign exchange market.
- 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.
- 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.
- Members are chosen with regard to the firm for which they work, their job responsibilities within that firm, their market stature, and their ongoing role in the market.

The composition of the Committee should include New York banks, other U.S. banks, foreign banks, investment banks and other dealers, foreign exchange brokerage firms (preferably to represent both foreign exchange and Eurodeposit markets), and the Federal Reserve Bank of New York (ex officio).

## **Committee Procedures**

The Committee will meet at least eight times per year (that is, monthly, with the exception of April, July, August, and December). The meetings will follow a specified agenda; however, the format of the discussion will be informal.

Members are expected to attend all meetings.

Any recommendation the Committee wishes to make on market-related topics will be discussed and decided upon only at its meetings. 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.

The Membership Subcommittee will be the Committee's one standing subcommittee. A representative of the Federal Reserve Bank of New York will serve as Chairman of the Membership Subcommittee. The Membership Subcommittee will aid in the selection and orientation of new members. Additional subcommittees composed of current Committee members may be organized on an ad hoc basis in response to a particular need.

Standing working groups may include an Operations Managers Working Group and a Chief Dealers Working Group. The working groups will be composed of market participants with an interest and expertise in projects assigned by the Committee.

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 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 discussions and deliberations.

Summaries of discussions of topics on the formal agenda of Committee meetings will be made available to market participants by the Federal Reserve Bank of New York on behalf of the Committee. The Committee will also publish an annual report, which will be distributed widely to institutions that participate in the foreign exchange market.

Meetings of the Committee will be held either at the Federal Reserve Bank of New York or at other member institutions.

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

## **Responsibilities of Committee Members**

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

The specific responsibilities of each member are:

- to function as a communicator to the Committee and to the marketplace on matters of mutual interest, bringing issues and information to the Committee, contributing to discussion and research, and sounding out colleagues on issues of concern to the Committee;
- to 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.

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2001, pages 9, 12, 14, 20, 67, 69  
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