Recent transgressions in financial markets have underscored the fact that one can hardly overstate the importance of reputation in a market economy. To be sure, a market economy requires a structure of formal rules . . . but rules cannot substitute for character.

On April 16, 2004, Alan Greenspan, Chairman of the Board of Governors of the Federal Reserve System, delivered these comments in a speech entitled "Capitalizing Reputation" before the Financial Markets Conference of the Federal Reserve Bank of Atlanta. His words carried particular resonance for the global foreign exchange industry, which faced two back-to-back scandals in late 2003 and early 2004: the arrests related to Operation Wooden Nickel and the foreign exchange losses announced by the National Australia Bank. Recognizing the need for integrity and sound practice in market operations, the Foreign Exchange Committee completed a range of strategic initiatives in 2004 that were designed to enhance the orderly and responsible functioning of the market and provide critical guidance to members of the foreign exchange community.

Underlying the Committee's initiatives were three broad goals:

- To consider carefully the implications of the new product offerings and service models that are increasingly prevalent in the foreign exchange market. Included in this review were white labeling, retail aggregation, and the rapid proliferation of electronic trading methods, each of which is altering traditional relationships in the market and raising new ethical issues.

- To review vigorously and update as appropriate our three principal best practice documents, *Guidelines for Foreign Exchange Trading Activities, Management of Operational Risk in Foreign Exchange,* and *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants*.

- To enhance dramatically the Committee's communications with the global foreign exchange community of dealers, end-users, central banks, and other foreign exchange committees and industry groups.

Although some issues confronting the Committee in 2004 were directly related to the scandals, most were driven by our members' recognition that, over the past few years, the foreign exchange market has rapidly evolved into a new market, with changed counterparty roles, new means of executing and settling trades, and more complex

market instruments. This new market requires careful deliberation and guidance, communicated broadly by market leaders. It is my hope and expectation that the world's largest market will adjust to the changes and adopt revised conventions so that the foreign exchange market will continue to function in a trustworthy and sustainable manner for the benefit of the entire industry.

During 2004, the Committee's close association with other foreign exchange committees and groups enabled us to complete a number of key projects. In particular, a multiyear effort to bring significant improvements to non-deliverable foreign exchange transactions in six Asian currencies was successfully concluded through close collaboration with the Singapore Foreign Exchange Market Committee and EMTA. The Committee also collaborated with the Foreign Exchange Joint Standing Committee, chaired by the Bank of England, in developing semiannual foreign exchange volume surveys for the months of April and October. The first survey of the U.K. and North American markets was conducted during October 2004. Over time, these new surveys will provide market participants with more frequent updates on developments and trends in aggregate activity levels.

Collaboration was also key to the Committee's efforts to develop guidance regarding the practice of trading foreign exchange on an unnamed basis. In 2004, the Committee and the Singapore Foreign Exchange Market Committee issued a joint statement highlighting the risks of unnamed counterparty trading. In addition, the Committee and the Foreign Exchange Joint Standing Committee both introduced changes regarding the practice of dealing with unnamed counterparties to the *Guidelines for Foreign Exchange Trading Activities* and the London Code of Conduct for Non-investment Products (NIPs Code), respectively.

In the sections of this letter that follow, I review all of these projects in more detail and discuss as well some other important efforts. The final section highlights initiatives that will carry over into the Committee's work in 2005 and identifies some new issues ripe for review and consideration.

COMMITTEE PROJECTS

Considering the Implications of White Labeling, Prime Brokerage, and the Retail/Wholesale Interface

Innovation in the foreign exchange market is not new, but rarely have we witnessed as many interlinked and profound changes as we have in the past few years. Indeed, I am certain that in the coming years we will look back on the past two years and recognize that we have experienced a watershed transition toward a new foreign exchange market. Not surprisingly, technology played a key role in this period. Electronic trading networks and their associated downstream and upstream order management and aggregation technologies created the improved work flows often hoped for but never before possible. Almost all end-users surely benefited from these changes, and many dealers did as well.

What new technology made possible was quickly combined with new product offerings as dealer firms jostled for market share. These new products included enhanced credit access via prime brokerage and electronic distribution via white-label trading platforms. The dramatically expanded role of the Continuous Linked Services (CLS) Bank in settling foreign exchange transactions also helped transform market mechanisms. New market entrants provided innovative services such as multibank portals and retail end-user market access.

Innovation in the foreign exchange market is not new, but rarely have we witnessed as many interlinked and profound changes as we have in the past few years.

During 2004, the Committee moved beyond monitoring these changes to the foreign exchange market and began considering their ramifications. Below I summarize some of the issues raised by foreign exchange white labeling, prime brokerage, and retail aggregation.

The white labeling of electronic foreign exchange services allows the "outsourcing" of foreign exchange pricing to large liquidity providers. Under a white-label arrangement, a bank (the "white-label bank") uses an e-commerce platform to allow its customers to trade at prices quoted by a third-party bank (the "liquidity provider"). The product allows the white-label bank to transfer market risk to the liquidity provider while earning a profit margin for the continued provision of credit services and account-coverage services to its customers. With this innovation, both the white-label bank and the liquidity provider are able to focus on providing those services in which they have a comparative advantage. Among other issues, the Committee discussed whether a dealer offering another dealer white-label services has some responsibility for "know your customer" (KYC) controls.

Foreign exchange prime brokerage allows clients to source liquidity from a variety of banks while maintaining a credit relationship, placing collateral, and settling with a single entity. The primary legal agreements are between the customer and the prime broker, and between the prime broker and the executing dealer. In such a structure, questions naturally arise regarding KYC responsibilities: Which dealer has responsibility for determining the suitability of a customer's transactions? Does the executing broker have KYC responsibility to determine other elements of appropriate customer due diligence duties, or do these reside entirely with the prime broker? These issues take on larger dimensions with the growth of foreign exchange as a source of absolute return, the increase in pooled-fund vehicles trading foreign exchange actively, and the rise of individuals trading foreign exchange—all developments that have been made possible through the availability of electronic platforms.

Clearly the increase in the trading of foreign exchange by individual investors brings forward essential customer due diligence questions. For example, do dealers that trade with retail foreign exchange aggregators assume any responsibility by means of their own KYC duties for those of the retail aggregator?

Although the Committee has not reached definitive best practice conclusions about the range of issues raised by foreign exchange white labeling, prime brokerage, or the retail/wholesale interface, we have developed three principles that will assist us in establishing any new guidance going forward. First, the best way to mitigate the risks raised by new products is to provide for clear contractual documentation that reflects the parties' expectations and allocates the risk and responsibilities between the parties. Second, supervisory guidance is clear that dealers, in order to protect themselves, must take into account the types of counterparties with which they deal and the overall context of the dealing relationship. Third, each new product must be analyzed with respect to the particular issues that it raises and the risks that it poses to the dealing institution.

During 2005, the Committee will carefully weigh the benefits of offering specific best practice guidance on the issues raised by the new market, but in the interim, we encourage market practitioners to use these three principles in reviewing each new product.

Eliminating the Use of Broker Points

In November 2003, federal authorities charged a large number of individuals working in New York-area foreign exchange trading firms with criminal behavior, including an alleged "points for cash scheme." We established a Points Subcommittee to assess potential changes or amplifications to Committee guidance regarding the use of broker points. While the Committee has for many years strongly discouraged the use of points or points-type compensation between individuals or firms, the Points Subcommittee revised the *Guidelines for Foreign Exchange Trading Activities* to address points and their use explicitly. The document now states that "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." I hope that this unambiguous language will put an end to this unsound practice, and I thank the subcommittee for arriving at a solution that best serves all market participants.

Eliminating Unnamed Counterparty Trading

In unnamed trading, an investment advisor engages a dealer to execute a foreign exchange trade with a client of the advisor whose identity is not revealed to the dealer. In 2001, the Committee began considering the risks associated with trading foreign exchange on an unnamed basis. The Committee determined that such practices constrain dealers' ability to assess the creditworthiness of their counterparties and to comply with KYC and anti-money-laundering rules and regulations. In addition, Committee members concluded that unnamed trading exposes dealers to significant legal, credit, compliance, and reputational risks and heightens the risk of fraud.

During 2002 and 2003, the Committee worked with the Foreign Exchange Joint Standing Committee, the Singapore Foreign Exchange Market Committee, the Tokyo Foreign Exchange Market Committee, the U.S.-based Financial Services Forum, and the Financial Markets Lawyers Group to encourage procedures that would effectively eliminate the practice. Specifically, a recommendation was made that investment advisor intermediaries put in place procedures that provide for the disclosure of client names to the credit and legal staffs of their clients' dealer counterparties. Foreign exchange dealers were also urged to establish procedures to guarantee that the identity of intermediaries' clients remains strictly confidential and is not released to their trading staff.

In early 2004, the Committee and the Singapore Foreign Exchange Market Committee issued a joint letter to underscore the importance of eliminating the risks to the financial system posed by unnamed trading, and—to the extent the practice exists in other over-the-counter markets—to urge other industry groups associated with these markets to discourage the practice. The Committee also amended the *Guidelines for Foreign Exchange Trading Activities* to address the issue specifically. On June 1, 2004, the revised Code of Conduct for Non-investment Products went into effect in the United Kingdom, in essence banning the practice of unnamed trading there. The NIPs Code is a reference source used for regulatory review of financial institutions and investment managers in the United Kingdom.

Enhancing Committee Communications

Over the past twenty-six years, the Foreign Exchange Committee has communicated its guidance, comments, and concerns through announcements, special reports, letters, the annual report, and special events. While this approach met the needs of the market in the past, it has become clear that we can better serve the global foreign exchange market by adopting a more comprehensive and efficient communications strategy that will reach the broad range of foreign exchange market participants. Our revised communications goals include raising awareness of the Committee and its mandate, promoting the understanding and implementation of best practices, and ensuring smooth market functioning in the face of contingency events.

In 2004, the reestablished Communications Subcommittee undertook several improvements to the group's communications efforts. To start, the Committee's website (<www.newyorkfed.org/fxc>) underwent a dramatic redesign. The new site, launched in January 2005, features more comprehensive content and a clearer, more up-to-date format. The organization of the site has also been improved, enabling visitors to use a variety of approaches to find the information they need. New functionalities have been added to the site, such as site bookmarking, URL forwarding, site search, and subscription to e-mail alerts.

Our mailing list is also being upgraded to improve the breadth and depth of the Committee's outreach efforts. Various industry contact lists have been added in recent months, and Committee member institutions have provided full contact information for the heads of various regional and product trading desks and for managers in compliance/audit, risk management, operations, and executive divisions.

Our revised communications goals include raising awareness of the Committee and its mandate, promoting the . . . implementation of best practices, and ensuring smooth market functioning in the face of contingency events.

Improving Documentation of Asian Non-deliverable Foreign Exchange Transactions

For a number of years, the Committee, in partnership with EMTA and the Singapore Foreign Exchange Market Committee, has worked to promote standardized trading documentation for non-deliverable foreign exchange transactions. In 2004, we published updated documentation for six Asian currencies: the Chinese renminbi, the Indonesian rupiah, the Indian rupee, the Korean won, the Philippine peso, and the Taiwanese dollar. This initiative continued our earlier efforts to improve documentation for non-deliverable foreign exchange transactions used for various Latin American currencies. The revised documentation will enhance efficient settlements in the event of a long-term disruption in a local market. In addition, new and amended rate source definitions were published for Annex A of the *1998 FX and Currency Option Definitions* for the six currencies.

The Committee and our cosponsors encourage the market to adopt the 2004 templates and are committed to supporting further efforts to improve documentation that will promote an efficient and orderly market.

OPERATIONS MANAGERS WORKING GROUP PROJECTS

Reviewing and Updating *Management of Operational Risk in Foreign Exchange*, or the *Sixty Best Practices*

In light of the available information concerning foreign exchange trading issues experienced at the National Australia Bank in 2001-03, the Operations Managers Working Group recommended revisions to the *Management of Operational Risk in Foreign Exchange*. During the Working Group's review of this document, the Committee concluded that firms' adherence to the *Sixty Best Practices* should reduce the possibility of their suffering weaknesses like those reportedly found at the National Australia Bank. At the same time, the Committee determined that additional guidance addressing foreign exchange derivatives would be helpful.

In particular, the Committee noted that the sale of deep-in-the-money options warrants special attention and specific procedures applicable to sales and trading staff. Procedures should ensure an appropriate level of review—if necessary, by senior trading management or risk management outside the sales and trading area—to guard against potential legal, reputational, and other risks. In addition, the Committee recommended that foreign exchange options portfolios be revalued to reflect the shape of the volatility curve, or the "smile effect." The new guidance can be found on pages 95-99.

Reviewing and Updating *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants*

The Operations Managers Working Group, in association with the Committee, published an updated version of *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants*. The revised document focuses on the requirements of nondealer participants with moderate foreign exchange activities and addresses the entire foreign exchange transaction process, including pre-trade preparation/documentation and trade execution and capture. Moreover, the 2004 update takes into account market developments and practices that have evolved since the paper's original publication in 1999, including the proliferation of electronic trading platforms, the surge in foreign exchange derivatives trading, the outsourcing of back office functions, and heightened attention to crisis management and contingency planning.

CHIEF DEALERS WORKING GROUP PROJECT

Establishing a Semiannual Foreign Exchange Volume Survey

Foreign exchange market participants have long relied upon the Bank for International Settlements' Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity for comprehensive global information regarding changes in aggregate market volumes, shifts in end-user demand, and trends in the geographic distribution of business. However, one of the characteristics of a vibrant market is the ready availability of frequent information on market volume. With this in mind, the Chief Dealers Working Group recommended that the Committee establish a semiannual foreign exchange survey of the North American market. More timely information on the size and structure of foreign exchange activity will enable participants to measure and effectively manage the risks associated with high trade volume in a rapidly evolving industry. Moreover, the increased frequency of available data should assist all market participants in their business planning and foster a deeper understanding of trends and patterns that are important to the smooth functioning of the market.

In conjunction with the United Kingdom's Foreign Exchange Joint Standing Committee, the Committee decided to conduct surveys of major market participants in the U.K. and North American markets every April and October. The results of the inaugural North American survey for October 2004 are included in this report and are also available on our website (<www.newyorkfed.org/fxc>). I am confident that market participants will quickly find the survey an invaluable source of information. I commend the Chief Dealers Working Group and the operations managers of participating dealers for their dedication in seeing this initiative through to implementation.

In conjunction with the United Kingdom's Foreign Exchange Joint Standing Committee, the Committee decided to conduct surveys of major market participants in the U.K. and North American markets every April and October.

2005 AND BEYOND

When I look back on my first year as chairman of the Foreign Exchange Committee, I am encouraged that we accomplished so much. This is a credit to the membership. The Committee members are uniquely qualified to serve because of their expertise, their many years of leadership experience, and the value they each place on contributing to the work of the Committee and the foreign exchange industry as a whole.

A number of initiatives launched by the Committee membership in 2004 or before will carry over into the work of the Committee in 2005.

In 2005, the Committee plans to review and revise the *Guidelines for Foreign Exchange Trading Activities* to better reflect developments in foreign currency options trading.

According to the Bank for International Settlements' 2004 Triennial Survey, options trading has grown 95 percent since 2001. The growth in this market segment has raised a number of issues: Difficulties such as those announced by the National Australia Bank early last year underscore the challenges of engaging in these more complex instruments. In this context, the Committee recently updated its *Management of Operational Risk in Foreign Exchange* to address more fully issues associated with foreign exchange derivatives.

Also in 2005, the Committee, the Singapore Foreign Exchange Market Committee, and EMTA, acting as cosponsors, expect to expand the currencies included under the new non-deliverable foreign exchange transaction architecture, beginning with the Malaysian ringgit. The group has also discussed initiatives to promote understanding and implementation of the new documentation, raising the possibility of a conference in Asia this year. More generally, the Committee will continue to support the efforts of EMTA to standardize non-deliverable foreign exchange transaction agreements, particularly as those agreements relate to the principles for settling these transactions when unexpected local market disruptions occur.

The Operations Managers Working Group, in association with the Committee, published an updated version of *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants* in 2004. In 2005, the Committee intends to offer a number of symposia to discuss the recommendations with market participants.

The Committee also plans to examine specific distribution channels, such as white labeling and retail aggregation, to determine whether market guidance on these types of products and services is required.

I expect that the Committee will also focus on a number of new questions in 2005. Given the increase in proprietary trading, potential exists for ethical conflicts within dealers' trading rooms when the interests of customers compete with those of units closely affiliated with the dealer. Another issue for consideration involves the value of best practice guidance specific to foreign exchange prime brokers. Finally, we will examine the impact of high-volume electronic trading on traditional control methods for exchange rate error minimization and liquidity management contingencies.

In summary, the Committee in 2005 will surely address ethical as well as technical issues as it strives to meet its objectives of enhancing knowledge of the foreign exchange markets, improving the quality of risk management in these markets, and developing recommendations on specific practices for market participants and their management. In closing his speech before the Financial Markets Conference last year, Chairman Greenspan underscored the importance of the sound and principled conduct of market operations: “I hope and anticipate that trust and integrity again will be amply rewarded in the marketplace as they were in earlier generations. There is no better antidote for the business and financial transgressions of recent years.”

Mark Snyder

Legal Initiatives

INTRODUCTION TO THE FMLG

The Financial Markets Lawyers Group (FMLG) is a key legal and policy advisory group for the Foreign Exchange Committee. It consists of about twenty lawyers from a variety of commercial and investment banks that are active in foreign exchange and other financial markets in the United States and Canada, as well as senior staff members from the Legal Department of the Federal Reserve Bank of New York (FRBNY). A senior FRBNY legal officer chairs the group. The group meets approximately once a month, and most meetings are held at the FRBNY. Like the Foreign Exchange Committee, the FMLG is sponsored by, but independent of, the FRBNY.

The FMLG was established in the early 1990s to provide ongoing counsel to the Foreign Exchange Committee on issues related to netting documentation. The FMLG provided support to the Foreign Exchange Committee in the development and publication in 1997 of widely used master netting agreements for foreign exchange transactions—the International Foreign Exchange and Options Master Agreement (FEOMA), the International Foreign Exchange Master Agreement (IFEMA), and the International Currency Options Market Master Agreement (ICOM). Since that time, the FMLG has continued to provide consultative support to the Committee while evolving into a group with an independent agenda of issues important to the wholesale financial markets. FMLG attorneys possess a broad knowledge of financial markets, especially foreign exchange.

In its advisory role to the Committee, the FMLG gives the Committee advice on new documentation and best practice recommendations and alerts the Committee to legislative, regulatory, and judicial developments pertinent to the foreign exchange market. The FMLG also seeks to raise awareness of—and to diminish—legal risks in financial markets. It serves as a channel of communication between the financial markets and other industry associations and official institutions in the United States and abroad. In addition, the FMLG interacts frequently with other industry groups, including EMTA, the International Swaps and Derivatives Association (ISDA), and the Bond Market Association (BMA), on foreign exchange matters.

The FMLG appreciates the importance of global cooperation and has developed a strong association with the European Financial Markets Lawyers Group (EFMLG) and the London-based Financial Markets Law Committee (FMLC). These three groups held a joint meeting in London in June 2004, and their next annual meeting will take place in June 2005 in New York. The EFMLG, FMLC, and FMLG advise one another of matters of mutual interest and coordinate their efforts on certain projects of global importance. The FMLG also looks forward to forming a strong relationship with the recently established legal subgroup of the London Foreign Exchange Joint Standing Committee.

PROJECTS DURING 2004

Many of the FMLG's projects in 2004 underscore the strong bond between the FMLG and the Committee. Other efforts reflect the FMLG's policymaking initiatives and the cohesive relationship that has evolved among various legal-oriented industry groups within the global community.

NON-DELIVERABLE FOREIGN EXCHANGE DOCUMENTATION

This past year, an FMLG member representing the Committee coordinated a successful effort to develop and launch new documentation for six non-deliverable Asian currencies in cosponsorship with the Singapore Foreign Exchange Market Committee and EMTA. The Tokyo Foreign Exchange Market Committee and the Treasury Markets Forum of Hong Kong also supported publication of the documentation for the benefit of market participants. The participation of Diane Virzera of the FMLG was crucial to the success of the effort given the technical legal issues embedded in non-deliverable foreign exchange trade documentation. Market participants have used the revised documentation, which is expected to promote efficient settlements in the market for non-deliverable foreign exchange transactions in the event of a long-term disruption in a local market.

IFXCO

Gary Sims of the FMLG took the lead in developing a revised international foreign exchange and currency option master agreement, under the name of "IFXCO," which will be recommended to the Committee for a 2005 publication. IFXCO is based on the 1997 FEOMA Agreement but is updated to reflect changes in market practices and to address the recommendations of the Global Documentation Steering Committee. One novel feature is that IFXCO consists of two parts: (1) the International FX and Currency Option (IFXCO) 2004 Master Agreement Terms, which is a printed document containing standard terms, and (2) a short "Terms Agreement," to be signed by the parties, which incorporates the Terms document and also specifies variable provisions that previously appeared in the Schedule to FEOMA. IFXCO should prove useful to parties that wish to update their master netting agreements and, at the same time, should streamline the execution process.

FMLC/FMLG *ENRON AUSTRALIA FINANCE V. TXU* WORKING GROUP

The FMLG joined the FMLC this past year to form a working group to review the 2004 decision of an Australian bankruptcy court on the operation of the "conditionality" clause in a close-out master netting agreement in Enron Australia's insolvency. The decision attracted significant attention in the financial markets because of its potential commercial and regulatory capital implications. FMLC and FMLG members, together with outside law firms, began their collaboration on this project to research and consider the issues raised by the court's decision.

MONITORING AND INFLUENCING LEGISLATIVE, REGULATORY, AND JUDICIAL ACTION

Throughout 2004, the FMLG closely followed pending legislation and regulation that could potentially affect the foreign exchange and financial markets. The FMLG provided its expertise to the U.S. Department of the Treasury as the department considered how the customer due diligence requirements of the USA Patriot Act should apply in the foreign exchange prime brokerage context. The FMLG continued to update the Committee on developments related to bankruptcy reform legislation and regulation of the commodities markets. In addition, on the FMLG's recommendation, the Committee joined ISDA in filing an *amicus* brief in an appeal of the important *Jugobanka A.D. and Beogradska Banka A.D. v. Superintendent of Banks* bankruptcy case in the Second District of New York. The brief appraises the appellate court of the significant adverse impact that the lower court's decision could have on close-out netting of foreign exchange and derivatives transactions entered with U.S. offices of foreign banks that become insolvent.

THE OPERATIONS MANAGERS WORKING GROUP

The FMLG worked closely with the Operations Managers Working Group this year on updates to *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants* and *Management of Operational Risk in Foreign Exchange*, or the *Sixty Best Practices*, to address foreign exchange trading issues experienced at the National Australia Bank.

OPINIONS

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

Works in Progress for 2005

In 2004, the Committee focused on revising its market guidance to reflect industry developments and issued updated versions of the *Management of Operational Risk in Foreign Exchange*, *Guidelines for Foreign Exchange Trading Activities*, and *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants*. The updated publications incorporate recommendations on a variety of issues, including unnamed trading, foreign exchange (FX) derivatives, trade dispute resolution, and authorization letters. Many of the Committee's longer-term projects will continue into 2005.

UPDATING TRADING GUIDANCE

As the foreign exchange industry continues to evolve, the Committee acknowledges the importance of revising its guidance to remain relevant and to address emerging issues. As reflected in the Bank for International Settlements' *Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity 2004*, average daily global turnover in foreign currency options has surged in recent years, rising by 95 percent between 2001 and 2004. At the same time, foreign exchange losses such as those announced by the National Australia Bank early in 2004 underscore the challenges of engaging in these more complex instruments. In this context, the Committee recently updated its *Management of Operational Risk in Foreign Exchange* to address more fully issues associated with foreign exchange derivatives. In 2005, the Committee plans to review and revise the *Guidelines for Foreign Exchange Trading Activities* to better reflect developments in this increasingly important market segment.

NON-DELIVERABLE FOREIGN EXCHANGE TRANSACTIONS

In 2004, the Foreign Exchange Committee, the Singapore Foreign Exchange Market Committee, and EMTA, acting as cosponsors, published updated documentation for non-deliverable foreign exchange transactions for six Asian currencies, with the Tokyo Foreign Exchange Market Committee and the Treasury Markets Forum of Hong Kong endorsing the effort. In 2005, the cosponsors expect to include other currencies under the new architecture, beginning with the Malaysian ringgit. The group has also discussed initiatives to promote the understanding and implementation of non-deliverable FX documentation and raised the possibility of a conference in Asia in 2005. More generally, the Committee will continue to support the efforts of EMTA to standardize non-deliverable FX agreements, particularly as they relate to principles of settling these transactions in the event of unexpected local market disruptions.

NONDEALER RECOMMENDATIONS

The Operations Managers Working Group, in association with the Committee, published an updated version of *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants* in 2004. The timeliness of this revision is highlighted by the preliminary results of the Bank for International Settlements' 2004 foreign exchange survey, which indicated that nondealers' average daily global trading volume rose by approximately 75 percent between 2001 and 2004 to account for 48 percent of total activity. The Committee also intends to follow up on the release of the 2004 updated document and offer a number of symposia to discuss the guidelines with market participants in New York and Europe in 2005.

RETAIL FOREIGN EXCHANGE DEVELOPMENTS

In 2004, the Committee established a working group to explore the trends and issues associated with increased retail participation in the foreign exchange market. In 2005, after working with the Financial Markets Lawyers Group to identify the legal implications of this development, the Committee will examine specific distribution channels, such as white labeling and retail aggregation, to determine whether market guidance on these products and services is required.

CLS BANK

As the Continuous Linked Settlement (CLS) Bank enters its second year of operation, the Committee will continue to focus on specialized issues involving CLS and its integration within the marketplace. In 2005, the Committee will invite CLS to present an update on its progress in providing third-party services and developing new products for fund managers. The Committee's efforts on this front will be facilitated by the participation of a CLS Bank representative as a member of the Committee.

EFFORTS OF THE WORKING GROUPS

The Chief Dealers Working Group, in close association with London's Foreign Exchange Joint Standing Committee, will continue its efforts to publish the Survey of North American Foreign Exchange Volume. The group will also assist the Committee in its initiative to update the *Guidelines for Foreign Exchange Trading Activities* to better reflect best practices in foreign exchange derivatives trading.

The agenda of the Operations Managers Working Group includes

- continuing efforts to address, in coordination with the Financial Markets Lawyers Group and the International Swaps and Derivatives Association, widespread industry difficulties in matching and exchanging documentation for exotic option transactions;
- participating in and providing support for the Second Global Operational Managers meeting, scheduled for April in London with the Foreign Exchange Joint Standing Committee as host;
- exploring further the risks associated with authentication, particularly the emerging trend of participants forwarding to dealing firms documentation that includes a number of limitations and restrictions affecting the firms' ability to authorize settlement-related instructions; and
- encouraging further progress in the institutional implementation of the Master Agreement Addendum for non-deliverable forwards, first published in January 2003.

Foreign Exchange Transaction Processing:

Execution-to-Settlement Recommendations for Nondealer Participants

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Introduction

The Foreign Exchange Market

The foreign exchange (FX) market is the largest and most liquid sector of the global financial system. According to the Bank for International Settlements' *Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity 2004*, FX turnover averages USD 1.9 trillion per day in the cash exchange market and an additional USD 1.2 trillion per day in the over-the-counter (OTC) FX and interest rate derivatives market.[1] The FX market serves as the primary mechanism for making payments across borders, transferring funds, and determining exchange rates between different national currencies.

The Changing Marketplace

Over the past decade, the FX market has grown in terms of both volume and diversity of participants and products. Although commercial banks have historically dominated the market, today's participants also include investment banks, brokerage companies, multinational corporations, money managers, commodity trading advisors, insurance companies, governments, central banks, and pension and hedge funds. In addition, the size of the FX market has grown as the economy has continued to globalize. The value of transactions that are settled globally each day has risen exponentially—from USD 1 billion in 1974 to USD 1.9 trillion in 2004.

What Is the Foreign Exchange Committee and What Are the Best Practices?

The Foreign Exchange Committee is an industry group sponsored by the Federal Reserve Bank of New York that has been providing guidance and leadership to the global FX market since its founding in 1978. In all its work, the Committee seeks to improve the efficiencies of the FX market, to encourage steps to reduce settlement risk, and to support actions that enhance the legal certainty of FX contracts.

In 1998, the Committee recognized the need for a checklist of best practices that could help nondealer participants entering the FX market to develop internal guidelines and procedures for managing risk. The original version of *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants* was published in 1999 by the Committee's Operations Managers Working Group to serve as a resource for market participants as they evaluate their policies and procedures regarding FX transactions. This 2004 update takes into account market practices that have evolved since the paper's original publication and supersedes previous recommendations by the Committee regarding nondealer participants.

The purpose of this paper is to share the experiences of financial institutions that are active in the growing FX market with nondealer participants that may participate in the FX market on a more occasional basis. The twenty-two issues highlighted are meant to promote risk awareness and provide "best practice" recommendations for nondealers. Participants in prime brokerage or similar arrangements should also be familiar with these recommendations. The implementation of these practices may mitigate some of the trading and operational risks that are specific to the FX industry. It may also help limit potential financial losses and reduce operational costs.

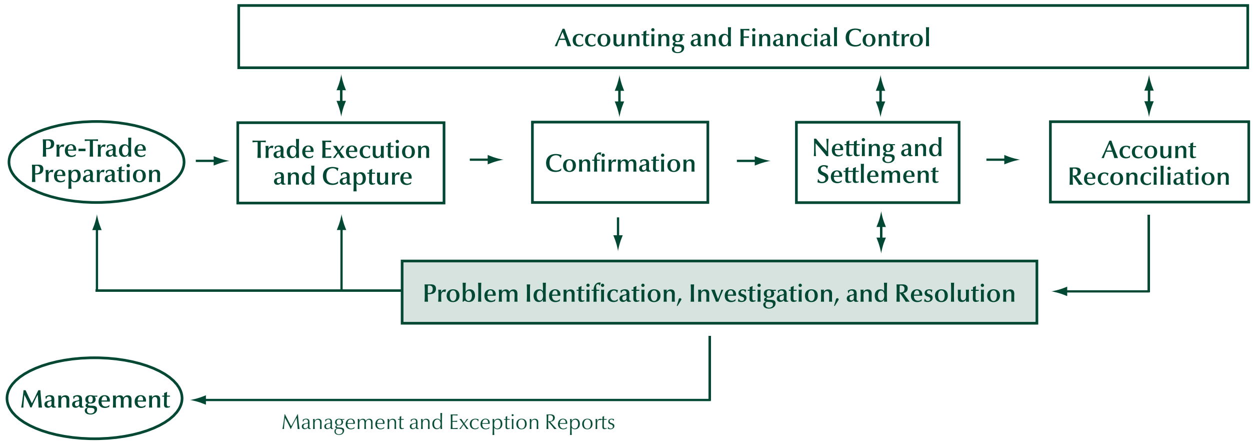
This document is primarily oriented toward nondealer participants with moderate FX activities. However, those nondealer participants that are particularly active in the FX market are encouraged to review the Committee's guidance to other market participants, specifically the *Guidelines for Foreign Exchange Trading Activities* and the *Management of Operational Risk in Foreign Exchange*. These documents provide a more detailed discussion of the business practices and operational guidelines appropriate to institutions with larger or more complex FX activities. Copies of these papers are available on the Committee's website at <www.newyorkfed.org/fxc>.

How to Use This Document

This document is divided into sections based on the five steps of the FX trade process flow: 1) pre-trade preparation, 2) trade execution and capture, 3) confirmation, 4) netting and settlement, and 5) account reconciliation and accounting/financial control processes. How

[1] Bank for International Settlements, *Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity 2004* (Basel: Bank for International Settlements, 2004).

Figure 1
The Foreign Exchange Process Flow



each of these individual phases integrates with the others in the FX process flow is outlined in Figure 1 above. Each section of this paper provides a process description, followed by a list of best practices specific to that phase. The paper concludes with general best practices that apply to overall risk management, including guidance for contingency planning and service outsourcing.

Pre-Trade Preparation and Documentation

Process Description

The pre-trade preparation and documentation process initiates the business relationship between two parties. During this process, both parties' needs and business practices should be established. An understanding of each counterparty's trading characteristics and level of technical sophistication should also develop. In summary, the pre-trade process allows the two parties to agree upon procedures and practices for ensuring the safe and sound conduct of business.

Recommendation No. 1: **Determine Foreign Exchange Needs and Develop Appropriate Infrastructure**

It is critical for each firm to determine its underlying FX requirements and establish the appropriate infrastructure to support its activities.

Before initiating activities in the FX market, a company should perform a thorough assessment of its FX needs within the context of its business and financial strategy. The risks associated with engaging in FX activities—including market, liquidity, credit, legal, operational, and settlement risk—need to be identified, quantified, and managed. Clear policies and procedures governing all aspects of FX trading and processing should be established, documented, and maintained. Because the nature of a firm's participation in the FX market may continually change and evolve, policies and procedures should be periodically reviewed and updated.

All market participants should ensure that they engage sufficient experienced personnel to execute the firm's FX mandate. Each group or individual playing a role in the FX process flow should have a complete understanding of how FX trades are initiated, recorded, confirmed, settled, and accounted for. Insufficient knowledge of the overall FX process, or the role played by each individual or group, can lead to an improper segregation of duties, inadequate controls, and increased risk. All market participants should provide ongoing employee education regarding business strategies, roles, responsibilities, and policies and procedures.

A clear policy on ethics should be established, such as a code of conduct that conforms to applicable laws, good convention, and corporate policies. In particular, the guidelines should address the issue of the receipt of entertainment and gifts on the part of trading staff and others in a position to influence the firm's choice of counterparties. Senior management should ensure that the policies are well circulated, understood, and periodically reviewed by all personnel. Such policies should be updated regularly to ensure they cover new business initiatives and market developments.

Recommendation No. 2:
Ensure Segregation of Duties

Nondealer participants should preclude individuals from having concurrent trading, confirmation, payment, and general ledger reconciliation responsibilities. Reporting lines for trading and operational personnel should be independent, and management should ensure that appropriate segregation of duties exists between operations and other business lines and within operations.

Responsibility for trade execution, trade confirmation, payments, and general ledger reconciliation should be segregated to the greatest extent possible. At a minimum, responsibility for trade execution should be segregated from responsibility for subsequent processing steps. When such duties are not segregated, the potential for fraud might increase. An individual may be able to complete unauthorized trades and hide any resultant losses.

Individuals responsible for confirmation, settlement, and reconciliation must be able to report any and all issues to management independent of the trading function. To do so, operations staff must have a reporting line that is not subject to an organizational hierarchy that could lead to a compromise of control. Firms with small treasury staffs and an overlap in employee responsibilities should establish and document workflows and systems to prevent unauthorized activities. Such arrangements should be periodically verified by an independent audit function.

Recommendation No. 3:
Determine Appropriate Documentation

An institution should determine its documentation requirements and know whether those requirements have been met prior to trading.

An institution should begin FX trading activities only if it has the proper documentation in place. The use of industry standard documents is strongly encouraged to provide a sound mutual basis for conducting financial market transactions. A variety of documents ensure the smooth functioning of the markets and protect participants in these markets:

- Authority documents address capacity—the right of an institution to enter into a transaction—and authority—permission for an individual to act on the institution's behalf.
- Confirmations summarize the significant trade terms and conditions agreed upon by the parties.
- Master agreements contain terms that apply to broad classes of transactions, expressions of market practice and convention, and terms for netting, termination, and liquidation.[2]
- Standard settlement instructions provide for the exchange of payment instructions in a standardized, secure, and authenticated format.

Each institution is responsible for ensuring that it has the capacity to enter into a transaction, as well as to monitor and enforce compliance with its internal procedures regarding any limitations there may be on the trading authority of its employees or third parties acting on its behalf. Thus, providing to dealing firms documentation that includes a number of investment limitations and restrictions affecting a participant's ability to trade and invest is not consistent with best market practice.[3]

Before executing a master agreement with a counterparty, an institution should also establish a policy on whether or not it will trade and in what circumstances. It should also be noted that electronic trading often requires additional or different documentation. Specifically, customer and user identification procedures, as well as security procedures, should be documented.

Nondealer participants should be aware that dealers are likely to be subject to statutory, regulatory, and supervisory requirements for "knowing" their customers. Dealers need to know the identity of their counterparties, the activities they intend to undertake with the dealer, and why they are undertaking those activities. While each dealer may have different procedures for implementing these requirements, nondealer participants should cooperate in providing the information that allows dealers to fulfill these obligations.

[2] The Financial Markets Lawyers Group (FMLG), an industry organization of lawyers representing major financial institutions sponsored by the Federal Reserve Bank of New York, has helped draft documentation for FX activities, including the International Foreign Exchange Master Agreement, the International Foreign Exchange and Options Master Agreement, the International Currency Options Market Master Agreement, and the International Foreign Exchange and Currency Options Master Agreement. These documents, endorsed by the Committee, are available on the FMLG's and the Committee's websites, <www.newyorkfed.org/fmlg> and <www.newyorkfed.org/fxc>, respectively.

[3] For related guidance on this issue, see the letter to market participants on the Committee's website.

Trade Execution and Capture

Process Description

The trade execution and capture function is the second phase of the FX processing flow. Deals may be transacted directly over a recorded phone line or through Internet-based systems (for example, proprietary trading systems or multidealer trading platforms). Trade information captured typically includes trade date, time of execution, settlement date, counterparty, financial instrument traded, amount transacted, price or rate, and may also include settlement instructions.

Recommendation No. 4: **Establish Appropriate Trading Policies and Procedures**

Firms should endeavor to execute transactions in a manner that reduces the possibility of misunderstandings, errors, or unauthorized dealing. Once completed, FX trades constitute binding obligations for both parties. Although subsequent processing steps (for example, confirmation) may uncover problems, the best protection from unanticipated loss is to avoid problems from the outset.

Transactions should be executed only by internally authorized staff who are fully conversant with market practice and terminology. Firms should avoid the use of obscure market jargon that may lead to confusion or miscommunication. When trades are verbally executed, traders should carefully reconfirm key terms with the counterparty before ending the call.

Firms should ensure that all trading is conducted at current market rates. Trades executed at off-market rates can conceal losses, facilitate accounting misstatements, or mask other illegitimate activities. Off-market trades also involve the extension of credit from one party to the other. Nondealer participants should establish controls to detect off-market dealing, such as comparing actual trade rates against daily market ranges and reviewing position revaluation results for unreasonable gains or losses.

In certain cases, valid business purposes may exist for completing off-market trades. Firms intending to complete off-market trades, including historical rate rollovers, should provide counterparties such additional information as is necessary to establish an underlying business purpose, as well as evidence that such dealing has been reported to and approved by senior management.[4] Responsibilities regarding monitoring and reporting off-market transactions should be clearly defined.

Firms electing to leave orders with FX dealers should establish a clear mutual understanding of how such orders will be handled, particularly with respect to fast or discontinuous markets or more serious market disruptions. Firms should clearly agree on the specific terms of the order, particularly

[4] 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, <www.newyorkfed.org/fxc>.

when such orders are activated, canceled, or modified by the occurrence of subsequent events. If certain aspects of an order are contingent upon the achievement of specific market levels, firms should agree in advance upon the rate or price sources to be used in such determination.

Given the twenty-four-hour nature of the FX market, nondealer participants should have a clear policy on dealing off the premises or during off-hours. Firms allowing such activity should consider instituting procedures to ensure that trades executed during off-hours are promptly reported to others in a prearranged manner (for example, e-mail, voicemail).

Recommendation No. 5: **Clearly Identify Counterparties**

All participants should clearly identify the legal entity on whose behalf they are undertaking a transaction. Trading on an unnamed basis is contrary to best market practice.

Each counterparty to a transaction should ensure that its organization recognizes the importance of clearly and accurately identifying the legal entities involved in the transaction. Additionally, firms should encourage staff to provide their names and affiliation in all counterparty communication. The benefits of clear counterparty identification are particularly evident when:

- the organization has multiple legal entities (subsidiaries, branches, offices, and affiliates) that are trading in the FX market;
- the organization has been involved in acquisition, divestiture, or restructuring activity that has led to name changes; and
- participants are transacting in an agency capacity.

Identification failure raises a number of potential risks, including:

- incorrect assessment of counterparty performance risk;
- erroneous bookings and/or misdirected settlements, creating potential losses for either counterparty to the transaction;
- misallocation of collateral; or
- disclosure of transaction information to incorrect entities.

The practice of trading FX on an unnamed basis—also referred to as undisclosed principal trading—presents an adverse risk to both individual market participants and the broader financial market. Such practices constrain a dealer's ability to assess the creditworthiness of its counterparties and to comply with "know your customer" and anti-money-laundering rules and regulations—exposing dealers to clear and significant legal, compliance, credit, and reputational risks as well as heightening the risk of fraud. It is recommended that investment advisors and dealers alike implement measures to eliminate the practice of trading on an unnamed basis. Specifically, investment advisors and FX intermediaries should develop a process to disclose client names to a dealer's credit, legal, and compliance functions before the execution of FX trades.

Recommendation No. 6:
Establish and Control System Access

As alternative technologies continue to emerge in the FX trading and processing environments, rigorous controls need to be implemented and monitored to ensure that data integrity and security are not undermined. Each system should have access controls that allow only authorized individuals to alter the system and/or gain user access.

The use of electronic interfaces among FX market participants—such as electronic communications networks (ECNs) and automated trading systems (ATSs)—has increased significantly in recent years. Use of robust electronic interfaces is encouraged as it reduces trading- and operations-related errors, particularly when trade data flow directly from the electronic trading platform to the front-end trading system and to the operations system books and records in order to achieve straight-through processing.

To maximize the benefits of these developments, access to production systems should be allowed only for those individuals who require such access to perform their job function. Lack of adequate access controls and related monitoring can result in unauthorized trading activity. Without proper access control, the flow of data between the electronic trading platform and the trading systems or back-office books and records can be altered, compromising data integrity and subjecting the firm to the risk of financial loss.

System access and entitlements should be periodically reviewed, and users who no longer require access to a system should have their access revoked. Under no circumstance should operations or trading functions have the ability to modify a production system if they are not authorized.

Recommendation No. 7:
Enter Trades in a Timely Manner

All trades should be entered immediately into appropriate systems and be accessible for both trading and operations processing as soon as they are executed.

It is crucial that all trades are entered immediately so that all systems and processes have timely, updated information. Front-end systems that capture deal information may interface with other systems that monitor and update credit limit usage, intraday profit and loss (P&L), trader positions, confirmation status, settlement instructions, and general ledger activity.

An institution's ability to manage risk may be adversely affected if it does not have accurate transaction updates in each of the above-mentioned areas. The failure to record trades promptly misrepresents contractual positions and can result in:

- inaccurate accounting records,
- mismanagement of market risk,
- misdirected or failed settlement, and
- the failure of a trade to be booked at all.

Confirmation

Process Description

The transaction confirmation is evidence of the terms of an FX or a currency derivative transaction. Therefore, proper management of the confirmation process is an essential control. This process is handled in many ways within FX markets. For spot, forward FX, or vanilla currency option transactions, counterparties exchange electronic or paper confirmations that identify transaction details and provide other relevant information. For structured and nonstandard transactions (for example, nondeliverable forwards [NDFs] and exotic currency option transactions), documents are prepared and 1) exchanged and matched by both counterparties, in the case of most dealers, or 2) signed and returned in the case of certain counterparties.[5]

All confirmations should be subject either to the *1998 FX and Currency Option Definitions* issued by the Committee, EMTA, and the International Swaps and Derivatives Association (ISDA) or to other appropriate guidelines.

Recommendation No. 8:
Confirm Trades in a Timely Manner

Both parties should make every effort to send confirmations or positively affirm trades within two hours after execution and in no event later than the end of the day.

Prompt confirmations are key to the orderly functioning of the marketplace because they reduce market risk and minimize losses due to settlement errors. In the absence of timely confirmation, trade discrepancies may go undetected, which can lead to disputes, disrupting the settlement process and increasing processing costs. Such discrepancies can also result in failed trades or inaccurate accounting records and can adversely affect any underlying security settlement. The incidence of error tends to increase when non-automated or verbal confirmations are not followed up with written or electronic confirmation. Given the significance of the confirmation process, it is important that the process is handled independently of the trading function.

Counterparties should have an understanding regarding confirmation practices, that is, whether they will both send out their own confirmations, or whether one counterparty will sign and return (affirm) incoming confirmations. It is not recommended that either party simply accept receipt of the counterparty confirmation as completion of the confirmation process.

Confirmations should be transmitted in a secure manner whenever possible. In the most developed markets, confirmations are generally sent via electronic message through a secure network. Automated confirmation matches one party's trade details to its counterparty's trade details. It minimizes manual error and is the most timely and efficient method because it requires no subsequent confirmation or manual check.

While a significant number of transaction confirmations are also sent via mail, e-mail, or

[5] Typically, the price maker prepares the confirmation and the price taker signs the confirmation.

fax, it is important to note that when these open communication methods are used there is a greater risk of human error or fraudulent correspondence. When sending confirmations by fax or e-mail, or when confirming by telephone, counterparties may agree to take additional steps to ensure receipt by the correct counterparty. Telephone confirmations should be used when no other method is available. Following the telephone confirmation, both parties should exchange and match written or electronic confirmations. With verbal confirmations, most dealers employ recorded telephone lines. Non-dealer participants may want to consider adopting this practice.

Data included in the confirmation should contain the following: the counterparty to the FX transaction, the office through which it is acting, the transaction date (or trade date), the value date (or settlement date), the amounts of the currencies being bought and sold, the buying and selling parties, and settlement instructions. Amended confirmations should be sent promptly when necessary. Settlement instructions for forward transactions should be reconfirmed two days before the settlement date.

Once a trade between counterparties has been confirmed, such trades may be the subject of novation or other similar agreements, which should be confirmed in a similarly vigorous manner.

Recommendation No. 9:
Block Trades Should Be Confirmed in a Timely Manner

The full amount of block trades transacted by agents should be confirmed as soon as possible, but always within two hours of the trade execution.

Investment managers or others acting as an agent may undertake "block" or "bundled" trades on behalf of multiple counterparties. Such trades are subsequently split into smaller amounts and apportioned to specific underlying funds or counterparties. The failure to allocate a block trade on a timely basis could result in increased credit, legal, and operational risk. Specifically, a delay in allocation hampers the allocation and management of credit exposure. Trade confirmation will also be delayed, which in turn may interrupt the settlement process and, in extreme cases, cause payment failures.

The full amount of block trades should be confirmed as soon as possible but always within two hours of trade execution. Allocations and confirmations to individual obligor accounts should be completed within four hours and no later than the end of the day on the trade date. To minimize errors caused by manual intervention, trade allocations should, if possible, be provided to the counterparty electronically, either through a secure network or through authenticated means.

Recommendation No. 10:
Resolve Confirmation Discrepancies in a Timely Manner

Discrepancies between a confirmation received from a counterparty and a firm's own records should be brought to the counterparty's attention

immediately. Escalation procedures should be established to resolve any unconfirmed or disputed deals.

When trade discrepancies exist, unintended exposure to market risk may arise. Trade discrepancies may also lead to increased processing costs, inaccurate accounting records, failed settlements (including underlying transactions), and financial loss. Unconfirmed trades may result from simple trade entry errors or more serious disagreements between counterparties with respect to the agreed-upon transaction terms.

To mitigate this risk, confirmation discrepancies should be brought to the counterparty's attention immediately and resolved as quickly as possible. Additionally, procedures should be established to escalate unresolved discrepancies to increasingly higher levels of management within established time frames. Automated trade confirmation systems are strongly recommended; these systems can highlight discrepancies and mitigate potential problems. Processes should be in place to detect chronic discrepancies.

Recommendation No. 11:
Unique Features of Foreign Exchange Options

Market participants should establish clear policies and procedures for the confirmation, exercise, and settlement of FX options and familiarize staff with the additional terms and conditions associated with options.

FX options are more complex products than spot and forward transactions. Options incorporate additional and often complex contract terms (such as strike price, call or put indicator, premium price, and expiry date and time). Their value is determined not only by spot and forward exchange rates but also by implied volatilities and time remaining until expiration. Option values may change rapidly and in a nonlinear manner. Those options possessing intrinsic value at expiration (strike rate more favorable than current market or index rate) must be properly exercised if such value is to be realized. The exercise of an option generally creates a new position in the underlying instrument (for example, spot dollar-yen) requiring further processing and settlement.

Special attention should be paid to the sale of options (short positions), which generally entail significantly higher levels of market risk. Similarly, management should be aware that "deep-in-the-money" option transactions by their nature involve unusual funding requirements and related credit exposure. There may be legitimate reasons for the sale of such options—for example, the "sell back" of an option or the implied delta within a separate derivatives product. However, it should be recognized that the sale of deep-in-the-money options can be used to exploit weaknesses in a counterparty's revaluation or accounting process that could create erroneous results. Procedures should ensure an appropriate level of review—if necessary, by senior trading management or risk management outside the sales and trading area—to guard against potential legal, reputational, and other risks.

Management should clearly define roles and responsibilities to ensure that the higher inherent risk of options is well controlled.

Operations staff should be fully versed in options terminology, contract provisions, and market practice. Transaction terms should be electronically, or at least verbally, confirmed on the trade date and both parties should sign a detailed confirmation. Certain exotic options may also require the collection of additional information or rates, depending on the product.

Premium settlements should be closely monitored to reduce the potential for out-trades.

Clear policies and procedures related to the exercise of options should be established and, where possible, documents and systems should be designed to auto-exercise expiring in-the-money options. It is recommended that, whether or not auto-exercise applies, both parties independently monitor their option positions for internal market and operational risk management purposes.

Recommendation No. 12:
Unique Features of Non-deliverable Forwards

Market participants should establish clear policies and procedures for the confirmation and settlement of FX NDFs and familiarize staff with the additional terms and conditions associated with NDFs in order to reduce operational risk.

NDFs are cash-settled FX instruments that require a rate fixing to determine the amount and direction of the cash settlement. NDFs, like options, have additional trade terms and require additional handling and processing. In addition, they may be more susceptible to market disruptions.

Counterparties should confirm NDF transaction terms electronically, or at least verbally, on the trade date. In addition to the standard transaction details (such as the counterparties and the offices through which they are acting, the transaction date, the notional amount of the currencies, and settlement instructions), NDFs involve additional trade terms that require confirmation, such as fixing source and date. Following telephone confirmation, both parties must validate, review, sign, and return the long-form confirmation to cover all nonfinancial information. Confirmations should be reviewed on the trade date to determine the fixing source, and transactions should be reviewed daily thereafter to ensure that fixings are obtained as required in the confirmation language.

When possible, counterparties are encouraged to use an addendum to an existing master agreement, indicating a set fixing rate for each currency.[6] On the fixing date, fixing advices that reflect the fixing rate and cash settlement amount should be generated and exchanged electronically (when possible).

[6] The Master Agreement Addendum for Non-deliverable Forwards is available online at the Committee's public website.

Netting and Settlement

Process Description

Settlement is the exchange of payments between counterparties on the value date of the transaction. Bilateral settlement netting is the practice of combining all trades between two counterparties due on a particular settlement date and calculating a single net payment in each currency. For example, if an institution executes twenty-five dollar-yen trades with the same counterparty, all of which settle on the same day, bilateral settlement netting will enable the institution to make only one or two netted payments.[7] *These netted payments will generally be much smaller than the gross settlement amount due. The establishment of settlement netting agreements between counterparties can thus reduce settlement risk, operational risk, and clearing costs.*

Various market utilities support multilateral settlement netting, which involves combining all trades between multiple counterparties and calculating a single net payment in each currency.

For counterparties that do not settle on a net basis, payment instructions are sent to nostro banks for all the amounts owed—as well as for expected receipts. Settlement instructions are sent one day before settlement, or on the settlement date, depending on the currency's settlement requirements. If a settlement error occurs in the process, it is typically quite costly. If a company fails to make a payment, it must compensate its counterparty, thus generating additional expense. Settlement errors may also cause an institution's cash position to be different than expected.

In addition, settlement risk—the risk that a company makes its payment but does not receive the payment it expects—can cause a large, even catastrophic, loss. This risk arises in FX trading because payment and receipt of payment often do not occur simultaneously. A properly managed settlement function reduces this risk. Settlement risk is measured as the full amount of the currency purchased and is present from the time a payment instruction for the currency sold becomes irrevocable until the time the final receipt of the currency purchased is confirmed.[8] Sources of this risk include internal procedures, intramarket payment patterns, finality rules of local payments systems, and operating hours of the local payments systems when a counterparty defaults.

Recommendation No. 13: **Net Payments and Confirm Bilateral Amounts**

Transaction payments should be netted whenever possible. Legal agreements should provide for settlement netting as well as "close-out" netting in the event transactions are terminated before maturity.

[7] Participants may also conduct "novational netting," which nets trades across currency pairs. For example, a dollar-yen trade and a euro-dollar trade may be netted for a single dollar payment.

[8] For additional information on settlement risk, see Foreign Exchange Committee, "Defining and Measuring FX Settlement Exposure," in *Foreign Exchange Committee 1995 Annual Report* (New York: Federal Reserve Bank of New York, 1996), and Foreign Exchange Committee, "Reducing FX Settlement Risk," in *Foreign Exchange Committee 1994 Annual Report* (New York: Federal Reserve Bank of New York, 1995).

Settlement on a gross basis not only increases the actual number of settlements that are necessary but also increases the probability of settlement errors. An enforceable settlement netting agreement has the benefit of entitling parties to reduce the number and size of payments between themselves.

The operational process of settlement netting should be supported by a legal agreement. Such an agreement may be a brief document that only supports settlement netting or a settlement netting provision that is included in a master agreement. The following master agreements have been developed as industry standard forms. Each form includes provisions for settlement netting (included as an optional term) and close-out netting:

- International Swaps and Derivatives Association (ISDA) Master Agreement,
- International Foreign Exchange Master Agreement (IFEMA) covering spot and forward currency transactions,
- International Currency Options Market Master Agreement (ICOM) covering currency options, and
- International Foreign Exchange and Options Master Agreement (FEOMA) covering spot and forward currency transactions and currency options.

Correct calculations of netted payments are important to ensure accurate settlement amounts and enhance the efficiency of operations. All market participants are encouraged to automate the actual netting calculation so that errors introduced by manual calculation are reduced. To protect against an improper settlement of a net amount, counterparties should confirm the net payment amount with each other at some predetermined cutoff time before settlement. Parties should establish the latest possible cutoff time for confirming bilateral netted amounts. Such a deadline will ensure that the parties agree on the transactions included in the net amounts.

In addition to settlement netting, master agreements may provide for close-out netting. Close-out netting clauses provide for 1) appropriate events of default, including default upon insolvency or bankruptcy; 2) close-out of all covered transactions; and 3) the calculation of a single net obligation from unrealized gains and losses. Close-out netting provisions provide significant risk management benefits to both parties to a master agreement by providing for the netting of all outstanding transactions under an agreement. Master agreements with legally enforceable close-out netting receive bankruptcy and insolvency law protection to ensure that the defaulting counterparty remains responsible for all existing contracts and transactions under the agreement and not just those it chooses. Thus, close-out netting provisions provide the legal basis for parties to measure counterparty exposure on a net rather than a gross basis.

Recommendation No. 14:
Provide Accurate and Complete Settlement Instructions

Market participants should always provide complete and accurate settlement instructions in a timely manner.

Settlement instructions should clearly reference the following information:

- the recipient's account name, account address, and account number;
- the name of the receiving bank, a SWIFT/ISO address, and a branch identifier; and
- the identity of any intermediary bank used by the recipient.

Incomplete or inaccurate settlement instructions heighten the risk of a disrupted settlement process, thus inflating processing and compensation costs. Failed FX settlements may also disrupt completion of an underlying transaction.

Recommendation No. 15: **Use Standing Settlement Instructions**

Standing settlement instructions (SSIs) should be exchanged whenever possible. Market participants should issue new SSIs, as well as changes to SSIs, in a secure manner.

SSIs allow for complete trade details to be entered quickly so that the confirmation process can begin as soon as possible after trade execution. By removing the need to exchange settlement instructions solely on a trade-by-trade basis, SSIs minimize the potential that incorrect or incomplete settlement instructions will be exchanged. SSIs also contribute to improved risk management and greater efficiency because the repeated manual inputting, formatting, and confirming of settlement instructions increases the cost of trade processing and heightens the opportunity for errors in settlement.

Market participants should exchange standing settlement instructions as soon as possible. When an institution changes its SSIs, it should provide as much lead time as possible—a minimum of two weeks' notice—to its counterparties to allow them to update their records before the new SSIs become effective. Institutions should update their records promptly when changes to SSIs are received from their counterparties.

All standing settlement instructions should be delivered electronically, if possible, and preferably through authenticated media because electronic delivery minimizes manual error and is the timeliest method of delivery. In addition, authenticated media reduce the potential for fraud. Changes to SSIs that cannot be delivered electronically should be delivered in writing and signed by an authorized individual.

Although SSIs are preferred, they are not always available and may not be appropriate for all trades. When SSIs are not used, the settlement instructions may be recorded at the time of trade execution. These exception settlement instructions should be delivered by the close of business on the trade date (if spot) or at least one day before settlement (if forward).

Recommendation No. 16: **Understand Risks Associated with Third-Party Payments**

In cases where a dealer agrees to process a third-party payment, nondealer participants should provide the information necessary for the dealer to internally approve and accurately make the payment.

Third-party payments are the transfer of settlement funds for an FX transaction to the account of an entity other than the counterparty to the transaction. Third-party payments raise important issues that should be considered carefully by a firm requesting such a practice.

Participants should recognize that third-party payments may significantly increase operational risk and potentially expose all involved to money laundering or other fraudulent activity. The practice also heightens the risk of financial loss; if the third-party payment is directed to an incorrect beneficiary, the payment may be delayed or even lost. Third-party payments may also create potential legal liability to the dealer making the payment.

Both nondealers and dealers should be aware of the risks involved with these transactions and should establish clear procedures beforehand for validating both the authenticity and correctness of such requests. In addition, nondealer participants should provide dealers with any written information required to screen, internally review and approve, and accurately make the third-party payment. For example, written information may include the third party's receiving bank name and address; the third party's account name, address, and number; and the nature of the third party's affiliation with the nondealer participant.

Also, third-party payment instructions should be provided via authenticated means. Instructions otherwise provided—for example, by phone or fax—should be reconfirmed by staff independent of those providing such instructions.

Account Reconciliation

Process Description

Account reconciliation occurs at the end of the trade settlement process to ensure that a trade has settled properly and that all expected cash flows have occurred. An institution should begin reconciliation as soon as it receives notification from its bank that payments are received. If possible, reconciliation should be performed before the payment system associated with each currency closes. Early reconciliation enables an institution to detect any problems in cash settlement and resolve them on the settlement date.

Recommendation No. 17:
Perform Timely Account Reconciliation

Account reconciliation—the process of comparing expected and actual cash movements—should be performed as early as possible.

The main objective of the account reconciliation function is to ensure that expected cash movements agree with the actual cash movements in a firm's currency accounts. The cause for the difference might be that wrong settlement or trade information was captured or that a payment error occurred.

Failure to reconcile expected and actual cash movements could result in the inability to recognize the underfunding of a transaction and/or an overdraft to the cash account. When cash is used to overfund a position, opportunity costs arise because cash often cannot be invested. When positions are underfunded, overdraft charges may be imposed unknowingly. Account reconciliation also

serves as a main line of defense in detecting fraudulent activity.

All market participants are encouraged to reconcile expected cash flows against actual cash flows in a timely manner. The sooner reconciliations are performed, the sooner an institution can take appropriate actions to ensure that its accounts are properly funded.

Recommendation No. 18:
Identify Nonreceipt of Payments and Submit Compensation Claims in a Timely Manner

Management should establish procedures for detecting nonreceipt of payments and for notifying appropriate parties of these occurrences. Escalation procedures should be in place for dealing with counterparties that fail to make payments. Parties that have failed to make a payment on a settlement date should arrange for the proper value to be applied and pay compensation costs promptly.

An institution should attempt to identify, as early in the process as possible, any expected payments that are not received. Failure to notify counterparties of problems in a timely manner may lead them to dismiss claims that are over a certain age, causing the institution to absorb overdraft costs.

All instances of nonreceipt of payment should be reported immediately to the counterparty's operations and/or trading units. When necessary, escalation procedures should be followed. Management may wish to consider a limited dealing relationship with counterparties that have a history of settlement problems. The counterparty that has not received payment generally incurs the costs associated with nonreceipt, including those associated with obtaining alternative funding on the settlement date, processing the exception, and administering payment. As a result, the counterparty may commence legal action to recover these costs. Compensation claims for nonreceipt or late receipt of payment should be agreed upon and paid expeditiously.

Accounting and Control

Process Description

The accounting function ensures that FX transactions are properly recorded on the balance sheet and income statement. If transaction information is not recorded correctly, a company's reputation may be tarnished if material restatements of financial accounts are necessary.

Accounting entries are first booked following the initiation of a trade. At the end of each trade day, all sub-ledger accounts flow through to the general ledger. Any discrepancies should be investigated as soon as possible to ensure that the institution's books and records reflect accurate information. The accounting area should ensure that outstanding positions are continually marked to market until close-out—after which realized gains and losses are calculated and reported.

Cash flow movements that take place on settlement date are also posted to the general ledger in accordance with accepted accounting procedures. The receipt and payment of expected cash flows at settlement are calculated in an institution's operations system.

Recommendation No. 19:
Conduct Daily General Ledger, Position, and P&L Reconciliation

Systematic reconciliations of both the general ledger to the operations system and the trading systems to the operations systems should be done daily.

Timely reconciliations will allow for prompt detection of errors in the general ledger and/or sub-ledgers and should minimize accounting and reporting problems. This reconciliation will ensure that the general ledger presents an accurate picture of an institution's market position. When problems are detected, they should be resolved as soon as possible. Senior management should be notified of accounting discrepancies to review and update control procedures as needed.

Position reconciliations allow an institution to ensure that all managed positions are the same as those settled by operations. This control is imperative when all deal entries and adjustments are not passed electronically between trading and operations. When straight-through processing is in place, the reconciliation ensures that all deals were successfully processed from trading to operations, along with all amendments. Because a discrepancy in P&L between trading and operations can indicate a difference in positions or market parameters (that is, rates or prices) all differences should be reported, investigated, and resolved in a timely manner.

Recommendation No. 20:
Conduct Daily Position Valuation

Using independent price sources, staff independent of the trading function should revalue outstanding positions to market daily. This is particularly important for market participants that are active in less liquid forward markets or in exotic options markets. Both trading and operations staff should be familiar with the procedures used for position valuation.

The daily revaluation of outstanding positions is an integral part of the control process. The end-of-day rates and prices that are used to create the position valuations should be periodically checked by an independent source. Staff independent of the trading function should ensure that the rates and prices used for end-of-day valuation represent market rates. Position valuations should be verified using independent sources such as market rate screens or broker/dealer quotations.

Illiquid markets present additional risk to an institution because illiquid instruments are traded infrequently, making them difficult to price. Often, it is difficult to obtain market quotes, thereby preventing timely and consistent position monitoring. Valuations may be distorted, causing improper management of risk. In such instances, a company should seek to obtain quotes from other counterparties active in the market. Management should be aware of these procedures so that it may effectively manage and evaluate illiquid market positions. These procedures allow an institution to mark to market its positions and to evaluate associated risks.

Marking to market reflects the current value of FX cash flows to be managed and provides information about market risk.[9] Senior management will be able to better manage and evaluate market positions when it knows positions are accurately valued on a daily basis.

Other

Recommendation No. 21:
Develop and Test Contingency Plans

Participants should develop plans for operating in the event of an emergency. Contingency plans should be periodically reviewed, updated, and tested.

In the event of a major disaster, a market participant may not be able to meet its obligation to monitor its market positions. It may also fail to meet its obligation to settle and confirm transactions. Inability to trade or settle transactions could subject the market participant to severe financial and reputational repercussions.

Firms should identify various types of potential disasters and examine how they may disrupt the participant's ability to satisfy its obligations (that is, issuing and receiving confirmations, performing settlements, and completing daily trading). Disaster recovery plans should identify requisite systems and procedural backups, management objectives, staffing plans, and the methodology for dealing with each type of disaster. Plans should be reviewed and tested periodically.

Backup sites that can accommodate the essential staff and systems should be established, maintained, and tested on a regular basis. Particularly for operations, market participants should consider developing a backup site that relies on a separate infrastructure (electricity, telecommunications, and so forth).

Additionally, all market participants should identify alternative methods of confirmation and settlement communication and practice these methods with counterparties. Such methods may require the use of fax or telex to ensure proper processing. During a disaster, a firm should notify its counterparties of potential processing changes. It should also provide counterparties with current contact information for key personnel to ensure that counterparties can contact the firm in an emergency.

Recommendation No. 22:
Ensure Service Outsourcing Conforms to Best Practices

If an institution chooses to outsource a portion or all of its operational functions, it should ensure that its internal controls and industry standards are met. A firm that outsources should have adequate operational controls in place to monitor the outsourcer and to ensure that functions are being performed according to agreed-upon standards and industry best practices.

An institution may choose to outsource some or all of its operations functions. However, outsourcing should neither

[9] Group of Thirty, Global Derivatives Study Group, *Derivatives: Practices and Principles* (Group of Thirty, 1993), p. 19.

compromise a firm's internal standards for confirmations, settlement, and payments nor diminish the responsibility of the firm to ensure settlement performance.

Controls should be in place to monitor vendors to ensure that internal standards are met. For example, trades should still be confirmed in a timely manner and proper escalation and notification procedures must still be followed.

Participants should establish procedures to periodically monitor service providers to ensure that they are performing functions according to agreed-upon standards and industry best practices. A service level agreement should be in place to clearly identify responsibility in case of failure to meet obligations.

Acknowledgments

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User's Guide:

2004 ASIAN CURRENCY Non-deliverable Foreign Exchange Documentation

Effective as of December 1, 2004

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User's Guide:

2004 ASIAN CURRENCY Non-deliverable Foreign Exchange Documentation

Effective as of December 1, 2004

Introduction

The Singapore Foreign Exchange Market Committee (SFEMC), EMTA, Inc. (EMTA), and the Foreign Exchange Committee (FXC) have cosponsored the publication of updated template terms for non-deliverable foreign exchange transactions for six Asian currencies (the "2004 Templates"). The Tokyo Foreign Exchange Market Committee and the Treasury Markets Forum of Hong Kong support the cosponsors in their publication of the updated documentation for the benefit of market participants.

The 2004 Templates are intended for use with the 1998 *FX and Currency Option Definitions* (including Annex A thereto) published by ISDA, Inc., EMTA, and the FXC (the "1998 Definitions"). The six Asian currencies that the 2004 Templates address are the Chinese Renminbi (CNY), the Indonesian Rupiah (IDR), the Indian Rupee (INR), the Korean Won (KRW), the Philippine Peso (PHP), and the Taiwan Dollar (TWD). In conjunction with the 2004 Templates, the cosponsors have published related survey methodologies (the "Methodologies") and amendments to the rate source definitions in Annex A of the 1998 Definitions. The 2004 Templates provide suggested contract terms to which market participants may agree on a bilateral basis in order to reduce documentation and settlement risk, generally promote sound market practice, and contribute to overall efficiency of the non-deliverable FX marketplace. Notwithstanding, the SFEMC, EMTA, and FXC recognize each market participant's need to develop standards for contractual relationships that reflect its own policies, procedures, and tolerance for risk. Each market participant is encouraged to use the 2004 Templates in their entirety or in part, in light of individual considerations.

In 2001, EMTA introduced to the industry standardized terms for the above currencies (the "2001 Templates") (excluding the Indonesian Rupiah, for which final template terms were never published) that reflected then-current market practice and helped to promote market efficiencies and reduce documentation risk. Since 2001, significant developments have taken place in the non-deliverable FX markets, and in particular in several of the Latin American markets. Substantial efforts have been made to improve the documentation architecture for these markets to better address concerns regarding the possibility of an extended closure of a local market and to improve valuation options and procedures in the event of such an occurrence. In large part, this effort has involved a move away from reliance on Calculation Agent Determination and the introduction of intermediate, market-based valuation alternatives.

The 2004 Templates extend the documentation improvements made in the Latin American markets into the Asian non-deliverable FX markets, modified as appropriate to take account of regional differences in market practices and conventions. Among other differences, while the templates for Latin American currencies are tailored to each market, a single standard for all six of the Asian currencies was deemed appropriate. As a result, all of the 2004 Templates and the six related Methodologies are substantially the same, with only very minor differences among them. These differences include the currency addressed by the template terms, the Settlement Rate Option, the Valuation City for Valuation Date purposes and, in the case of one of the Methodologies, the start time for the fallback survey. Accordingly, it is possible to discuss the 2004 Templates and the Methodologies generically in this User's Guide, while noting these minor differences, where relevant. A more detailed description of the key terms in the 2004 Templates follows.

Capitalized terms in this User's Guide have the meanings ascribed to them in the 1998 Definitions, the 2004 Templates, and the Methodologies.

The 2004 Template Terms

Overview of Key Amendments to the 2001 Templates

The key characteristics of the 2001 Templates were inclusion of Price Source Disruption as the sole Disruption Event, a first Disruption Fallback of Currency Reference Dealers (CURA4) (a Calculation Agent poll of four dealers in the relevant currency), and a final Disruption Fallback of Calculation Agent Determination, as well as reliance on an eight-day Drop-dead Date following an Unscheduled Holiday. For purposes of the 2001 Templates, an Unscheduled Holiday would occur if the market failed to open for business and the market had less than 48 hours' notice of this occurrence.

In the 2004 Templates, the definition of Unscheduled Holiday has been retained, but

the 2001 Template concept of an eight-day Drop-dead Date has been replaced with a 14-calendar-day Deferral Period. In addition, the 2004 Templates alter the "waterfall" of Disruption Fallbacks to provide for a new first Disruption Fallback of Valuation Postponement for Price Source Disruption (a period of up to 14 calendar days) and the new SFEMC Indicative Survey (the "Indicative Survey"). For the third Disruption Fallback, a second valuation postponement period of three days (Fallback Survey Valuation Postponement) will apply if the Indicative Survey fails, before a final reliance on Calculation Agent Determination.

The sole Disruption Event in the 2004 Templates continues to be Price Source Disruption. A few additional new terms (*e.g.*, Cumulative Events and Maximum Days of Postponement) also are added to facilitate operation of the new Disruption Fallbacks.

Adding a 14-Day Deferral Period for Unscheduled Holiday

The term Drop-dead Date included in the 2001 Templates has been deleted and a new term, Deferral Period for Unscheduled Holiday, appears in the 2004 Templates. This change was made first in the updated EMTA 2002 Amended ARS NDF Documentation.[1] A Deferral Period of 14 calendar days is adopted in Asia as more market-appropriate, as compared to a 30-day Deferral Period adopted for the Latin American currencies. The 2004 Templates provide that, upon the occurrence of an Unscheduled Holiday, the Deferral Period will commence on the Scheduled Valuation Date for the transaction. If the Unscheduled Holiday continues, valuation of the transaction may be deferred for up to 14 consecutive calendar days. The Valuation Date will occur on the earlier of (i) the first Business Day after the Unscheduled Holiday ceases to exist and (ii) the first day after the Deferral Period lapses (the 15th calendar day, assuming it would have been a Business Day but for the Unscheduled Holiday). At that time, a Spot Rate may be determined for the contract based on the next available Disruption Fallback.

With respect to certain Latin American currencies, the market has developed consensus on a 30-day Deferral Period, based on its experience with closures in countries such as Argentina and Venezuela that have lasted for several weeks and resulted from systemic political or economic events. In Asia, foreign exchange markets generally have experienced shorter-term closures, more often in response to the occurrence of a natural disaster. For the 2004 Templates, agreement was reached on lengthening the period of time that valuation would be deferred from eight days to 14 days, which was considered a sufficient time period in the context of Asia to allow the market opportunity to reopen. Allowing the market adequate time to resume normalcy enhances the opportunity for transparent, open-market pricing, which market participants deemed to be preferable to a forced close-out of contracts at a time when price discovery is more difficult.

[1] See EMTA's *User's Guide to Revised ARS NDF Documentation*, effective as of January 2, 2003.

Valuation Postponement as the New First Disruption Fallback

Valuation Postponement is set forth as the first Disruption Fallback following a Price Source Disruption. In the 2004 Templates, Valuation Postponement for Price Source Disruption operates in a parallel fashion to a Deferral Period in the event of an Unscheduled Holiday. Under the 1998 Definitions, a Price Source Disruption occurs when it becomes impossible to obtain the Settlement Rate on the Valuation Date. The 2004 Templates continue to rely on the Settlement Rate Option originally identified for each currency in the 2001 Templates, many of which are official rates. Accordingly, if the Settlement Rate Option is unavailable on the Valuation Date for the contract, Valuation Postponement for Price Source Disruption operates to postpone its valuation until the earlier to occur of (i) the availability of the Settlement Rate Option and (ii) the lapse of the Maximum Days of Postponement. The Maximum Days of Postponement for the 2004 Templates is 14 consecutive calendar days (paralleling the length of the Deferral Period). Upon reaching the Maximum Days of Postponement after a Price Source Disruption, the next Business Day will be deemed to be the Valuation Date for purposes of the contract, and a Spot Rate may be determined for the contract based on the next applicable Disruption Fallback.

Current market practice is to use a "rolling" approach to deferring or postponing valuation of non-deliverable FX contracts. That is, the Deferral Period or Valuation Postponement commences on the Scheduled Valuation Date of each contract. Under this approach, valuation of each contract is rolled forward until the 14-day time period for deferral or postponement has been completed for that contract. The Indicative Survey would continue to be conducted throughout the time that the Unscheduled Holiday or Price Source Disruption continues, which may extend well beyond any initial deferral or postponement period, unless the SFEMC discontinues it due to Insufficient Responses (see page 10 below). This approach has been adopted in the 2004 Templates to be consistent with market practice for certain Latin American currencies. It also enhances the integrity of the Settlement Rate by maximizing the circumstances in which contracts can be valued based on the primary settlement rate, given the potential for the market to reopen and normalize over time.

SFEMC Indicative Survey Rate as the New Second Disruption Fallback

In the event the primary rate source is not available and the Deferral Period or the Maximum Days of Postponement, as the case may be, have lapsed, the 2004 Templates now provide for a more market-based pricing mechanism in the form of an indicative survey of active market participants. The SFEMC will sponsor, and a service provider will administer, the Indicative Survey. It is designed to operate the same way for each of the Asian currencies, and is intended to provide the market with a rate quotation that potentially could function for long periods of time even in the event of significant market dislocation, illiquidity, or other disruption. The Indicative

Survey is specifically designed to be market-based and obtained from active, offshore participants in the relevant non-deliverable FX market and to produce an indicative rate quotation that may be obtained in times of market closure or disruption when a spot or a real dealing rate otherwise is not available. The Indicative Survey would be conducted pursuant to a Methodology specific to the currency, and the resulting rate would be published on the websites of the SFEMC and the Association of Banks in Singapore (ABS), as well as on the screens of Telerate.

Fallback Survey Valuation Postponement as the New Third Disruption Fallback

If the Indicative Survey is commenced but ultimately fails to result in the posting of a rate, the new Disruption Fallback, Fallback Survey Valuation Postponement, will operate to postpone valuation of the transaction for up to three additional Business Days. If the Indicative Survey fails on the first Business Day, the SFEMC will attempt the Indicative Survey for up to two additional Business Days. If the Indicative Survey fails on the third Business Day, the non-deliverable FX contract will be valued on that day pursuant to the next Disruption Fallback, which is Calculation Agent Determination.

Given the significance of the Indicative Survey as a fallback mechanism for valuing non-deliverable FX contracts, it was considered important to provide a reasonable opportunity for the Indicative Survey to begin to function properly. For this reason, the 2004 Templates build in an additional three days of valuation postponement. Failure of the Indicative Survey to result in the posting of a rate for three consecutive days may signal that the market has been severely compromised. At that point, market participants may decide to initiate a close-out of outstanding contracts on a bilateral basis. The SFEMC intends to abandon the Indicative Survey after a failure to obtain a rate for three consecutive polling days, although the Methodology allows the SFEMC flexibility and discretion to initiate and/or continue to operate the Indicative Survey if the circumstances warrant.

Calculation Agent Determination as the Final Disruption Fallback

The industry has recognized in recent years the inherent frailties in relying on Calculation Agent Determination in a closed or disrupted market. The concern over significant, systemic basis risk for market participants in such situations was a motivating factor in addressing this contract term in EMTA's revised (and now current) template terms for Argentina and Brazil non-deliverable FX transactions. These initiatives responded to the FXC's recommendation that EMTA work with market participants to develop valuation methodologies that would be more dependable and effective in the event of unscheduled market holidays.

While the 2004 Templates introduce intermediary Disruption Fallbacks in order to make more remote the likelihood that a Calculation Agent Determination actually will be needed, it ultimately is necessary to rely on Calculation Agent Determination for valuation when no other attempt to derive a rate source has succeeded. Accordingly, the

2004 Templates retain this as the final Disruption Fallback.

Limiting the Deferral Period or the Maximum Days of Postponement

A new term, Cumulative Events, eliminates the possibility that valuation could be deferred or postponed for unreasonably long periods of time by the interaction or overlapping of the Deferral Period for Unscheduled Holiday and the Maximum Days of Postponement. The Cumulative Events paragraph operates to limit the amount of time that valuation may be deferred or postponed under such circumstances to a maximum of 14 calendar days.

The EMTA Latin America confirmation templates introduced this paragraph, and it is used in the 2004 Templates with some additional language to make a clarification consistent with its operation in the Latin America templates. For purposes of the operation of Cumulative Events, this added language clarifies that the transaction will be valued not later than the day after 14 calendar days have lapsed if the Unscheduled Holiday or Price Source Disruption is continuing on that day. The Unscheduled Holiday or Price Source Disruption is treated as not continuing on any day that is a weekend day or otherwise is not a scheduled Business Day (*e.g.*, a national holiday). In such a case, valuation of the transaction will be further postponed or deferred until Monday or the next Business Day (or day that would have been a Business Day but for an Unscheduled Holiday). In addition, it should be noted that the Cumulative Events paragraph will not operate to limit the application of Fallback Survey Valuation Postponement. That is, valuation may be postponed for up to an additional three consecutive polling days beyond the 14 calendar days of a Deferral Period or the Maximum Days of Postponement, despite the proscription contained in the Cumulative Events paragraph.[2]

Specifying the Maximum Days of Postponement

As noted above, the 2004 Templates also incorporate the new term, Maximum Days of Postponement, for purposes of Valuation Postponement. This is the same number of calendar days as the Deferral Period in order to achieve consistent treatment in the time periods for deferral or postponement of a contract following occurrence of either an Unscheduled Holiday or a Price Source Disruption. The Maximum Days of Postponement operates to limit the number of days valuation of a contract will be deferred following the occurrence of a Price Source Disruption.

[2] To illustrate, if a Price Source Disruption occurs on September 1st (Monday in the local market) and an Unscheduled Holiday occurs on September 10th (Wednesday), Cumulative Events ensures that deferral/postponement of valuation is limited to September 15th (Monday). The SFEMC will attempt the Survey on September 15th and, if it fails on September 15th due to insufficient responses, will re-attempt the Survey on September 16th and September 17th. Valuation of non-deliverable FX contracts with an original Scheduled Valuation Date of September 1st may be postponed to no later than September 17th. If the Survey fails on September 17th, the next applicable Disruption Fallback will apply. This example assumes that September 15, 16, and 17 would have been Business Days in the local market but for a continuing Unscheduled Holiday.

Specifying the Valuation City

All of the 2004 Templates, with the exception of the IDR Template, refer exclusively to the local currency market to determine whether it is a Business Day for Valuation Date purposes. Thus, the 2004 Templates specify a Valuation City of Beijing for CNY, Mumbai for INR, Seoul for KRW, Manila for PHP, and Taipei for TWD, which is consistent with current market practice in Asia. For IDR, however, market practice is to observe holidays in both Jakarta and Singapore, given the importance of the Singapore-based trading community to the offshore market, and both are specified as Valuation Cities in the 2004 IDR Template.

Endnotes

The 2004 Templates include endnotes that incorporate references to the new Methodologies. Also provided is an optional provision that dealers who participate in the relevant SFEMC Indicative Survey may include at their discretion, to alert counterparties to the possibility that their rate quotation as a Survey Participant for any Valuation Date may affect the calculation of the Settlement Rate for the specific non-deliverable FX contract.

Revisions to Annex A Rate Source Definitions

Together with the publication of the 2004 Templates and the related Methodologies, ISDA, EMTA, and the FXC have adopted revisions to Annex A of the 1998 Definitions, in order to add a new SFEMC Indicative Survey Rate definition for each currency and to make certain other revisions. Annex A now includes rate source definitions for the new SFEMC Indicative Survey Rate for each Asian currency:

(1) *CNY* - SFEMC CNY INDICATIVE SURVEY RATE or CNY02,

(2) *IDR* - SFEMC IDR INDICATIVE SURVEY RATE or IDR02,

(3) *INR* - SFEMC INR INDICATIVE SURVEY RATE or INR02,

(4) *KRW* - SFEMC KRW INDICATIVE SURVEY RATE or KRW04,

(5) *PHP* - SFEMC PHP INDICATIVE SURVEY RATE or PHP05, and

(6) *TWD* - SFEMC TWD INDICATIVE SURVEY RATE or TWD04.

They each contemplate a rate published by the SFEMC based on bid and offer quotes solicited from dealers in the offshore markets for the relevant currency and are pegged to the underlying Methodology (see below).

In addition to the above amendments, a new rate source definition for IDR has been added to Annex A. Previously, Annex A had no rate source definition for IDR, and the market by informal consensus referred to a rate reported by the Association of Banks in Singapore (derived from a poll of offshore banks based on their perception of onshore rates) as the primary fixing rate for IDR. This rate is now formally included in Annex A as IDR ABS or IDR01 and is used as the Primary Settlement Rate Option in the new IDR 2004 Template.

Second, the TWD Rate Source definitions in Annex A (TWD Telerate 6161 or TWD01 and TWD TAIFX1 or TWD03) have been revised to permit a limited delay in reporting the spot rate of the first trade that takes place through the Taipei Forex Inc. without triggering a Price Source Disruption. The first trade usually takes place through Taipei Forex Inc. at 11 a.m. Taipei time, and its spot rate is posted in the first 15-minute segment. However, the first trade could take place and its spot rate could be posted at a later 15-minute interval. The 2001 TWD Template treated failure to report the spot rate of the first trade by 11 a.m. Taipei time as a Price Source Disruption but also provided, in the first Disruption Fallback, that the first spot rate posted at any succeeding 15-minute interval after 11 a.m., up to and including 12 Noon Taipei time, would be used to value the transaction. The 2004 Templates eliminate this provision as the first Disruption Fallback and no longer treat delayed reporting of the spot rate as a Price Source Disruption. Instead, Annex A's TWD Rate Source Definitions incorporate the possibility of publication of the first spot rate in any 15-minute interval between 11 a.m. and 12 Noon Taipei time. 12 Noon Taipei time was deemed to be an appropriate cut-off point before resorting to the SFEMC TWD Indicative Survey Rate, because failure of a trade to take place through Taipei Forex Inc. by this time would indicate a disruption in the local market.

SFEMC Indicative Survey Methodology

The Methodology related to each of the 2004 Templates is the same, with one exception for INR noted below, in order to both reflect and promote a consistent approach to valuation of Asia non-deliverable FX currencies in the event of local market closures or disruptions. The Methodologies require the polling to commence for the SFEMC Indicative Survey Rate after any 14-day Deferral Period or after the Maximum Days of Postponement have lapsed. SFEMC (through a service provider) will poll offshore financial institutions that are active participants in the relevant currency market and included in a list of Participating Banks published on the SFEMC's website. Although multiple offices of financial institutions in different regions will be included in the poll, only one office of each financial institution (the first to submit a quote) will be included as a Participating Bank in each Indicative Survey. The Indicative Survey is limited to offshore offices of Participating Banks in order to increase the chances of receiving reliable rate quotes under adverse market conditions that can impede the ability of onshore offices to provide them.

As an example of the way the Methodologies work, to generate a rate quotation for the KRW Indicative Survey, Participating Banks will be asked to provide their reasonable judgment of what is (or, in the case of an Unscheduled Holiday, would be) the current prevailing free market KRW spot rate (bid-offer pair) for a standard size KRW/U.S. Dollar wholesale financial transaction for same-day settlement in the Seoul marketplace on the Valuation Date. In arriving at this indicative quotation, Participating Banks are asked to consider all relevant available rates, whether expressed or implied, as well as the historical relationships between such rates and the free market KRW/USD wholesale financial spot rate. Listed below are some of the types of rates that may be taken into

consideration in the determination of this indicative rate:

- the spot rate(s) implied in the offshore non-deliverable foreign exchange market for KRW/U.S. Dollar transactions;
- the spot rate implied by any other financial market transactions (to the extent open for business);
- the spot rate used in connection with any commercial transactions for goods or services from offshore suppliers and providers;
- any existing rate for trade finance transactions; and
- any other existing, unofficial rate for KRW/U.S. Dollar transactions (commercial or otherwise).

The factors are intended to be non-exclusive factors that could, in the dealer's discretion under the prevailing circumstances, be taken into consideration in arriving at its rate quotation.

For all of the Asian currencies except INR, the Indicative Survey will commence at 11 a.m. Singapore time (or as soon as practicable thereafter) through an automated process by which Survey Participants will submit quotes. To better accommodate the opening of the market in India, the Indicative Survey will commence at 12 Noon Singapore time (or as soon as practicable thereafter) for the INR. The SFEMC, ABS, and Telerate will publish on their websites the SFEMC Indicative Survey Rate at 3:30 p.m. Singapore time (or as soon as practicable thereafter).

The SFEMC Indicative Survey Rate will be derived by averaging the mid-point of each bid-offer pair, with highs and lows discarded according to the Methodology, resulting in a single Settlement Rate for all contracts with that Valuation Date. A minimum of five responses was deemed prudent to ensure the integrity of the SFEMC Indicative Survey Rate while also recognizing that, compared to non-deliverable FX markets in other regions such as Latin America, the Asia currency non-deliverable FX markets are smaller and involve fewer participants. To further ensure the integrity of the Indicative Survey and to increase transparency to the market, SFEMC will publish individual rate quotations comprising survey responses the Business Day following publication of the SFEMC Indicative Survey Rate. Individual rate quotations (with attribution to the quoting dealers) that are subsequently published will be stale information and not representative of an actual dealing rate by the time they are published. This practice follows that of EMTA in its administration of industry and indicative surveys, and experience has indicated that this practice confers significant benefit on the marketplace by directly promoting transparency.

The SFEMC will discontinue the Indicative Survey when the primary rate source again becomes available or when, for three consecutive polling days, no SFEMC Indicative Survey Rate is obtained due to Insufficient Responses. The SFEMC retains discretion to continue or re-initiate the Indicative Survey based on its judgment of market conditions at the time. The Methodology addresses situations in which the SFEMC Indicative

Survey Rate has successfully commenced and been conducted for some period of time, but has begun to fail. Abandonment of the Indicative Survey due to Insufficient Responses from Survey Participants would signal a lack of need of such institutions for a continuing rate quotation, due to natural attrition in the marketplace as contracts mature or are settled bilaterally by market participants. Nonetheless, the mechanics of the Indicative Survey are structured to ensure that polling can continue and a rate can be quoted for long periods of time during market disruption (and theoretically indefinitely) if the parameters of the Methodology can be observed. In addition, the SFEMC has discretion to make appropriate changes to the Methodology to ensure its continued operation and integrity.

Appendix A – Chinese Renminbi

2004 Template Terms
Annex A Rate Source Definitions
SFEMC Indicative Survey Methodology

2004 SFEMC, EMTA & FXC Template Terms for CNY/USD Non-Deliverable FX Transaction

General Terms:	
Trade Date:	
[Date of Annex A][1]:	
Reference Currency:	CNY
[Notional Amount][2]:	
[Forward Rate][2]:	
[Reference Currency Notional Amount][2]:	
Reference Currency Buyer:	
Reference Currency Seller:	
Settlement Currency:	U.S. Dollars
Settlement Date:	[DATE CERTAIN], *provided*, *however*, that if the Scheduled Valuation Date is adjusted in accordance with the Following Business Day Convention, then the Settlement Date shall be as soon as practicable after the Valuation Date, but in no event later than two Business Days after such date.
Settlement:	Non-Deliverable
Settlement Rate Option:	CNY SAEC (CNY01)[3]
Valuation Date:	[DATE CERTAIN] ("Scheduled Valuation Date"), subject to adjustment in accordance with the Preceding Business Day Convention; and in the event of an Unscheduled Holiday, subject to adjustment in accordance with the Following Business Day Convention.

Disruption Events:

Price Source Disruption:	Applicable

Disruption Fallbacks:

1. Valuation Postponement	
2. Fallback Reference Price:	SFEMC CNY Indicative Survey Rate (CNY02)[4,5]
3. Fallback Survey Valuation Postponement	
4. Calculation Agent Determination of Settlement Rate	

Other Terms:

"Unscheduled Holiday":	"Unscheduled Holiday" means that a day is not a Business Day and the market was not aware of such fact (by means of a public announcement or by reference to other publicly available information) until a time later than 9:00 a.m. local time in the Principal Financial Center(s) of the Reference Currency two Business Days prior to the Scheduled Valuation Date.
"Deferral Period" for Unscheduled Holiday:	In the event the Scheduled Valuation Date becomes subject to the Following Business Day Convention, and if the Valuation Date has not occurred on or before the 14th consecutive day after the Scheduled Valuation Date (any such period being a "Deferral Period"), then the next day after the Deferral Period that would have been a Business Day but for the Unscheduled Holiday, shall be deemed to be the Valuation Date.
"Valuation Postponement" for Price Source Disruption:	"Valuation Postponement" means, for purposes of obtaining a Settlement Rate, that the Spot Rate will be determined on the Business Day first succeeding the day on which the Price Source Disruption ceases to exist, unless the Price Source Disruption continues to exist (measured from the date that, but for the occurrence of the Price Source Disruption, would have been the Valuation Date) for a consecutive number of calendar days equal to the Maximum Days of Postponement. In such event, the Spot Rate will be determined on the next Business Day after the Maximum Days of Postponement in accordance with the next applicable Disruption Fallback.
"Fallback Survey Valuation Postponement":	"Fallback Survey Valuation Postponement" means that, in the event that the Fallback Reference Price is not available on or before the 3rd Business Day (or day that would have been a Business Day but for an Unscheduled Holiday) succeeding the end of either (i) Valuation Postponement for Price Source Disruption, (ii) Deferral Period for Unscheduled Holiday, or (iii) Cumulative Events, then the Settlement Rate will be determined in accordance with the next applicable Disruption Fallback on such day. For the avoidance of doubt, Cumulative Events, if applicable, does not preclude postponement of valuation in accordance with this provision.

Cumulative Events:	Except as provided below, in no event shall the total number of consecutive calendar days during which either (i) valuation is deferred due to an Unscheduled Holiday, or (ii) a Valuation Postponement shall occur (or any combination of (i) and (ii)), exceed 14 consecutive calendar days in the aggregate. Accordingly, (x) if, upon the lapse of any such 14 day period, an Unscheduled Holiday shall have occurred or be continuing on the day following such period that otherwise would have been a Business Day, then such day shall be deemed to be a Valuation Date, and (y) if, upon the lapse of any such 14 day period, a Price Source Disruption shall have occurred or be continuing on the day following such period on which the Spot Rate otherwise would be determined, then Valuation Postponement shall not apply and the Spot Rate shall be determined in accordance with the next Disruption Fallback.
Maximum Days of Postponement:	14 calendar days
Relevant City for Business Day for Valuation Date:	Beijing
Relevant City for Business Day for Settlement Date:	New York
Calculation Agent:[6]	

ENDNOTES

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

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

3. The CNY SAEC (CNY01) Rate is published at approximately 5:00 p.m. Beijing time on the Valuation Date.

4. The SFEMC CNY Indicative Survey Rate is determined pursuant to the SFEMC CNY Indicative Survey Rate Methodology dated December 1, 2004.

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

   [Quoting Dealer Disclaimer:]

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

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

   Calculation Agents: Party A and Party B

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

Amended Chinese Renminbi Rate Source Definition

Effective as of December 1, 2004, Annex A of the 1998 FX and Currency Option Definitions (the "1998 Definitions") is amended to add a new section, Section 4.5(a)(i)(B), as follows:

(B) "SFEMC CNY INDICATIVE SURVEY RATE" or "CNY02" each means that the Spot Rate for a Rate Calculation Date will be the Chinese Renminbi/U.S. Dollar Specified Rate for U.S. Dollars, expressed as the amount of Chinese Renminbi per one U.S. Dollar, for settlement in two Business Days, as published on SFEMC's website (*www.sfemc.org*) at approximately 3:30 p.m. (Singapore time), or as soon thereafter as practicable, on such Rate Calculation Date. The Spot Rate will be calculated by SFEMC (or a service provider SFEMC may select in its sole discretion) pursuant to the SFEMC CNY Indicative Survey Methodology (which means a methodology, dated as of December 1, 2004, as amended from time to time, for a centralized industry-wide survey of financial institutions that are active participants in the Chinese Renminbi/U.S. Dollar markets for the purpose of determining the SFEMC CNY Indicative Survey Rate).

Practitioner's Note:

- *Parties that specify in confirmations that a particular version of Annex A applies to their trades should reference Annex A effective as of December 1, 2004, if they desire to incorporate the new Chinese Renminbi rate source definition into their trades. If parties do not specify in their confirmations a particular version of Annex A, the above Chinese Renminbi rate source definition will apply to trades that incorporate the 1998 Definitions and have a trade date on or after December 1, 2004.*

Singapore Foreign Exchange Market Committee ("SFEMC")
CNY Indicative Survey Rate Methodology
Dated as of December 1, 2004

Capitalized terms not defined below are defined in the 1998 FX and Currency Option Definitions as published by the International Swaps and Derivatives Association, EMTA, Inc. and the Foreign Exchange Committee, or in the 2004 SFEMC, EMTA & FXC Template Terms for CNY/USD Non-Deliverable FX Transaction.

I. The SFEMC CNY Indicative Survey

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

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

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

II. Use of Survey Results

- SFEMC (itself or through a service provider) will determine the mid-point of each bid-offer pair. The arithmetic mean of the mid-points will be used to deter-

mine the CNY Indicative Survey Rate, rounded to the fourth decimal point as described below.

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

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

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

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

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

III. Insufficient Responses

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

IV. CNY Indicative Survey Rate Publication

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

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

- The response of each Participating Bank to the Indicative Survey (bid-offer pair) will be available on the Publication Site at

9:00 a.m. (Singapore time) on the first Business Day in Beijing (or calendar day that would have been a Business Day but for an Unscheduled Holiday) following the Business Day on which the relevant CNY Indicative Survey Rate is published, or as soon thereafter as practicable.

V. Discontinuing the CNY Indicative Survey

- The CNY Indicative Survey will be discontinued (i) on the calendar day first following the Business Day in Beijing on which the CNY SAEC (CNY 01) is available for the determination of a Settlement Rate, or (ii) on the calendar day first following polling for the CNY Indicative Survey that results in Insufficient Responses for three consecutive polling days. Notwithstanding the foregoing, nothing herein will be construed to prevent SFEMC from continuing or re-initiating the CNY Indicative Survey at an appropriate time.
- A notice that the CNY Indicative Survey has been discontinued will be published on the Publication Site.

VI. Amendments to the Methodology

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

VII. Disclaimer

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

Appendix B – Indonesian Rupiah

2004 Template Terms
Annex A Rate Source Definitions
SFEMC Indicative Survey Methodology

2004 SFEMC, EMTA & FXC Template Terms for IDR/USD Non-Deliverable FX Transaction

General Terms:

Trade Date:	
[Date of Annex A][1]:	
Reference Currency:	IDR
[Notional Amount][2]:	
[Forward Rate][2]:	
[Reference Currency Notional Amount][2]:	
Reference Currency Buyer:	
Reference Currency Seller:	
Settlement Currency:	U.S. Dollars
Settlement Date:	[DATE CERTAIN], *provided*, *however*, that if the Scheduled Valuation Date is adjusted in accordance with the Following Business Day Convention, then the Settlement Date shall be as soon as practicable after the Valuation Date, but in no event later than two Business Days after such date.
Settlement:	Non-Deliverable
Settlement Rate Option:	IDR ABS (IDR01)[3]
Valuation Date:	[DATE CERTAIN] ("Scheduled Valuation Date"), subject to adjustment in accordance with the Preceding Business Day Convention; and in the event of an Unscheduled Holiday, subject to adjustment in accordance with the Following Business Day Convention.

Disruption Events:

Price Source Disruption:	Applicable

Disruption Fallbacks:

1. Valuation Postponement	
2. Fallback Reference Price:	SFEMC IDR Indicative Survey Rate (IDR02)[4,5]
3. Fallback Survey Valuation Postponement	
4. Calculation Agent Determination of Settlement Rate	

Other Terms:

"Unscheduled Holiday":	"Unscheduled Holiday" means that a day is not a Business Day and the market was not aware of such fact (by means of a public announcement or by reference to other publicly available information) until a time later than 9:00 a.m. local time in the Principal Financial Center(s) of the Reference Currency two Business Days prior to the Scheduled Valuation Date.
"Deferral Period" for Unscheduled Holiday:	In the event the Scheduled Valuation Date becomes subject to the Following Business Day Convention, and if the Valuation Date has not occurred on or before the 14th consecutive day after the Scheduled Valuation Date (any such period being a "Deferral Period"), then the next day after the Deferral Period that would have been a Business Day but for the Unscheduled Holiday, shall be deemed to be the Valuation Date.
"Valuation Postponement" for Price Source Disruption:	"Valuation Postponement" means, for purposes of obtaining a Settlement Rate, that the Spot Rate will be determined on the Business Day first succeeding the day on which the Price Source Disruption ceases to exist, unless the Price Source Disruption continues to exist (measured from the date that, but for the occurrence of the Price Source Disruption, would have been the Valuation Date) for a consecutive number of calendar days equal to the Maximum Days of Postponement. In such event, the Spot Rate will be determined on the next Business Day after the Maximum Days of Postponement in accordance with the next applicable Disruption Fallback.
"Fallback Survey Valuation Postponement":	"Fallback Survey Valuation Postponement" means that, in the event that the Fallback Reference Price is not available on or before the 3rd Business Day (or day that would have been a Business Day but for an Unscheduled Holiday) succeeding the end of either (i) Valuation Postponement for Price Source Disruption, (ii) Deferral Period for Unscheduled Holiday, or (iii) Cumulative Events, then the Settlement Rate will be determined in accordance with the next applicable Disruption Fallback on such day. For the avoidance of doubt, Cumulative Events, if applicable, does not preclude postponement of valuation in accordance with this provision.

Cumulative Events:	Except as provided below, in no event shall the total number of consecutive calendar days during which either (i) valuation is deferred due to an Unscheduled Holiday, or (ii) a Valuation Postponement shall occur (or any combination of (i) and (ii)), exceed 14 consecutive calendar days in the aggregate. Accordingly, (x) if, upon the lapse of any such 14 day period, an Unscheduled Holiday shall have occurred or be continuing on the day following such period that otherwise would have been a Business Day, then such day shall be deemed to be a Valuation Date, and (y) if, upon the lapse of any such 14 day period, a Price Source Disruption shall have occurred or be continuing on the day following such period on which the Spot Rate otherwise would be determined, then Valuation Postponement shall not apply and the Spot Rate shall be determined in accordance with the next Disruption Fallback.
Maximum Days of Postponement:	14 calendar days
Relevant City for Business Day for Valuation Date:	Jakarta and Singapore
Relevant City for Business Day for Settlement Date:	New York
Calculation Agent:[6]	

ENDNOTES

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

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

3. The IDR ABS (IDR01) Rate is published at approximately 11:00 a.m. Singapore time on the Valuation Date.

4. The SFEMC IDR Indicative Survey Rate is determined pursuant to the SFEMC IDR Indicative Survey Rate Methodology dated December 1, 2004.

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

   [Quoting Dealer Disclaimer:]

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

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

   Calculation Agents: Party A and Party B

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

Indonesian Rupiah Rate Source Definition

Effective as of December 1, 2004, Annex A of the 1998 FX and Currency Option Definitions (the "1998 Definitions") is amended to add new Sections 4.5(a)(vii)(A) and 4.5(a)(vii)(B) as follows:

(A) "IDR ABS" or "IDR01" each mean that the Spot Rate for a Rate Calculation Date will be the Indonesian Rupiah/U.S. Dollar spot rate, expressed as the amount of Indonesian Rupiah per one U.S. Dollar, for settlement in two Business Days, reported by the Association of Banks in Singapore which appears on the Telerate Page 50157 to the right of the caption "Spot" under the column "IDR" at approximately 11:00 a.m., Singapore time on that Rate Calculation Date.

(B) "SFEMC IDR INDICATIVE SURVEY RATE" or "IDR02" each means that the Spot Rate for a Rate Calculation Date will be the Indonesian Rupiah/U.S. Dollar Specified Rate for U.S. Dollars, expressed as the amount of Indonesian Rupiah per one U.S. Dollar, for settlement in two Business Days, as published on SFEMC's website (*www.sfemc.org*) at approximately 3:30 p.m., Singapore time, or as soon thereafter as practicable, on such Rate Calculation Date. The Spot Rate will be calculated by SFEMC (or a service provider SFEMC may select in its sole discretion) pursuant to the SFEMC IDR Indicative Survey Methodology (which means a methodology, dated as of December 1, 2004, as amended from time to time, for a centralized industry-wide survey of financial institutions that are active participants in the Indonesian Rupiah/U.S. Dollar markets for the purpose of determining the SFEMC IDR Indicative Survey Rate).

Practitioner's Notes:

- *"IDR ABS" or "IDR01" refer to a rate reported by the Association of Banks in Singapore, which is derived from a poll of offshore banks based of their perception of onshore rates.*

- *Parties that specify in confirmations that a particular version of Annex A applies to their trades should reference Annex A effective as of December 1, 2004, if they desire to incorporate any or all of the new Indonesian Rupiah rate source definitions into their trades. If parties do not specify in their confirmations a particular version of Annex A, the above Indonesian Rupiah rate source definitions will apply to trades that incorporate the 1998 Definitions and have a trade date on or after December 1, 2004.*

Singapore Foreign Exchange Market Committee ("SFEMC")
IDR Indicative Survey Rate Methodology
Dated as of December 1, 2004

Capitalized terms not defined below are defined in the 1998 FX and Currency Option Definitions as published by the International Swaps and Derivatives Association, EMTA, Inc. and the Foreign Exchange Committee, or in the 2004 SFEMC, EMTA & FXC Template Terms for IDR/USD Non-Deliverable FX Transaction.

I. The SFEMC IDR Indicative Survey

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

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

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

II. Use of Survey Results

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

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

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

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

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

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

III. Insufficient Responses

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

IV. IDR Indicative Survey Rate Publication

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

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

- The response of each Participating Bank to the Indicative Survey (bid-offer pair) will be available on the Publication Site at

9:00 a.m. (Singapore time) on the first Business Day in both Jakarta and Singapore (or calendar day that would have been a Business Day but for an Unscheduled Holiday) following the Business Day on which the relevant IDR Indicative Survey Rate is published, or as soon thereafter as practicable.

V. Discontinuing the IDR Indicative Survey

- The IDR Indicative Survey will be discontinued (i) on the calendar day first following the Business Day in both Jakarta and Singapore on which the IDR ABS (IDR 01) is available for the determination of a Settlement Rate, or (ii) on the calendar day first following polling for the IDR Indicative Survey that results in Insufficient Responses for three consecutive polling days. Notwithstanding the foregoing, nothing herein will be construed to prevent SFEMC from continuing or re-initiating the IDR Indicative Survey at an appropriate time.

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

VI. Amendments to the Methodology

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

VII. Disclaimer

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

Appendix C – Indian Rupee

2004 Template Terms
Annex A Rate Source Definitions
SFEMC Indicative Survey Methodology

2004 SFEMC, EMTA & FXC Template Terms for INR/USD Non-Deliverable FX Transaction

General Terms:	
Trade Date:	
[Date of Annex A][1]:	
Reference Currency:	INR
[Notional Amount][2]:	
[Forward Rate][2]:	
[Reference Currency Notional Amount][2]:	
Reference Currency Buyer:	
Reference Currency Seller:	
Settlement Currency:	U.S. Dollars
Settlement Date:	[DATE CERTAIN], *provided*, *however*, that if the Scheduled Valuation Date is adjusted in accordance with the Following Business Day Convention, then the Settlement Date shall be as soon as practicable after the Valuation Date, but in no event later than two Business Days after such date.
Settlement:	Non-Deliverable
Settlement Rate Option:	INR RBIB (INR01)[3]
Valuation Date:	[DATE CERTAIN] ("Scheduled Valuation Date"), subject to adjustment in accordance with the Preceding Business Day Convention; and in the event of an Unscheduled Holiday, subject to adjustment in accordance with the Following Business Day Convention.

Disruption Events:

Price Source Disruption:	Applicable

Disruption Fallbacks:

1. Valuation Postponement	
2. Fallback Reference Price:	SFEMC INR Indicative Survey Rate (INR02)[4,5]
3. Fallback Survey Valuation Postponement	
4. Calculation Agent Determination of Settlement Rate	

Other Terms:

"Unscheduled Holiday":	"Unscheduled Holiday" means that a day is not a Business Day and the market was not aware of such fact (by means of a public announcement or by reference to other publicly available information) until a time later than 9:00 a.m. local time in the Principal Financial Center(s) of the Reference Currency two Business Days prior to the Scheduled Valuation Date.
"Deferral Period" for Unscheduled Holiday:	In the event the Scheduled Valuation Date becomes subject to the Following Business Day Convention, and if the Valuation Date has not occurred on or before the 14th consecutive day after the Scheduled Valuation Date (any such period being a "Deferral Period"), then the next day after the Deferral Period that would have been a Business Day but for the Unscheduled Holiday, shall be deemed to be the Valuation Date.
"Valuation Postponement" for Price Source Disruption:	"Valuation Postponement" means, for purposes of obtaining a Settlement Rate, that the Spot Rate will be determined on the Business Day first succeeding the day on which the Price Source Disruption ceases to exist, unless the Price Source Disruption continues to exist (measured from the date that, but for the occurrence of the Price Source Disruption, would have been the Valuation Date) for a consecutive number of calendar days equal to the Maximum Days of Postponement. In such event, the Spot Rate will be determined on the next Business Day after the Maximum Days of Postponement in accordance with the next applicable Disruption Fallback.
"Fallback Survey Valuation Postponement":	"Fallback Survey Valuation Postponement" means that, in the event that the Fallback Reference Price is not available on or before the 3rd Business Day (or day that would have been a Business Day but for an Unscheduled Holiday) succeeding the end of either (i) Valuation Postponement for Price Source Disruption, (ii) Deferral Period for Unscheduled Holiday, or (iii) Cumulative Events, then the Settlement Rate will be determined in accordance with the next applicable Disruption Fallback on such day. For the avoidance of doubt, Cumulative Events, if applicable, does not preclude postponement of valuation in accordance with this provision.

Cumulative Events:	Except as provided below, in no event shall the total number of consecutive calendar days during which either (i) valuation is deferred due to an Unscheduled Holiday, or (ii) a Valuation Postponement shall occur (or any combination of (i) and (ii)), exceed 14 consecutive calendar days in the aggregate. Accordingly, (x) if, upon the lapse of any such 14 day period, an Unscheduled Holiday shall have occurred or be continuing on the day following such period that otherwise would have been a Business Day, then such day shall be deemed to be a Valuation Date, and (y) if, upon the lapse of any such 14 day period, a Price Source Disruption shall have occurred or be continuing on the day following such period on which the Spot Rate otherwise would be determined, then Valuation Postponement shall not apply and the Spot Rate shall be determined in accordance with the next Disruption Fallback.
Maximum Days of Postponement:	14 calendar days
Relevant City for Business Day for Valuation Date:	Mumbai
Relevant City for Business Day for Settlement Date:	New York
Calculation Agent:[6]	

ENDNOTES

1. Include only if parties wish to modify the presumption that Annex A is incorporated as amended through the Trade Date.
2. Parties must specify either (a) a Notional Amount and a Reference Currency Notional Amount or (b) a Forward Rate and either a Notional Amount or a Reference Currency Notional Amount.
3. The INR RBIB (INR01) Rate is published at approximately 2:30 p.m. Mumbai time on the Valuation Date.
4. The SFEMC INR Indicative Survey Rate is determined pursuant to the SFEMC INR Indicative Survey Rate Methodology dated December 1, 2004.
5. A party may wish to include the following additional provision if such party is or may be a participant in the SFEMC INR Indicative Survey:

   [Quoting Dealer Disclaimer:]

   The parties acknowledge that one or both parties to this Transaction acting directly or through a branch or an affiliate may be requested to provide a quotation or quotations from time to time for the purpose of determining the SFEMC INR Indicative Survey Rate and such quotation may affect, materially or otherwise, the settlement of the Transaction.
6. The following may be applicable for inter-dealer trades where parties agree to be Joint Calculation Agents:

   Calculation Agents: Party A and Party B

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

Amended Indian Rupee Rate Source Definition

Effective as of December 1, 2004, Annex A of the 1998 FX and Currency Option Definitions (the "1998 Definitions") is amended to add a new section, Section 4.5(a)(ii)(B), as follows:

(B) "SFEMC INR INDICATIVE SURVEY RATE" or "INR02" each means that the Spot Rate for a Rate Calculation Date will be the Indian Rupee/U.S. Dollar Specified Rate for U.S. Dollars, expressed as the amount of Indian Rupee per one U.S. Dollar, for settlement in two Business Days, as published on SFEMC's website (*www.sfemc.org*) at approximately 3:30 p.m. (Singapore time), or as soon thereafter as practicable, on such Rate Calculation Date. The Spot Rate will be calculated by SFEMC (or a service provider SFEMC may select in its sole discretion) pursuant to the SFEMC INR Indicative Survey Methodology (which means a methodology, dated as of December 1, 2004, as amended from time to time, for a centralized industry-wide survey of financial institutions that are active participants in the Indian Rupee/U.S. Dollar markets for the purpose of determining the SFEMC INR Indicative Survey Rate).

Practitioner's Note:

Parties that specify in confirmations that a particular version of Annex A applies to their trades should reference Annex A effective as of December 1, 2004, if they desire to incorporate the new Indian Rupee rate source definition into their trades. If parties do not specify in their confirmations a particular version of Annex A, the above Indian Rupee rate source definition will apply to trades that incorporate the 1998 Definitions and have a trade date on or after December 1, 2004.

Singapore Foreign Exchange Market Committee ("SFEMC")
INR Indicative Survey Rate Methodology
Dated as of December 1, 2004

Capitalized terms not defined below are defined in the 1998 FX and Currency Option Definitions as published by the International Swaps and Derivatives Association, EMTA, Inc. and the Foreign Exchange Committee, or in the 2004 SFEMC, EMTA & FXC Template Terms for INR/USD Non-Deliverable FX Transaction.

I. The SFEMC INR Indicative Survey

- **Commencing the INR Indicative Survey:** SFEMC (itself or through a service provider SFEMC will select in its sole discretion) will conduct a survey of financial institutions for the purpose of determining the SFEMC INR Indicative Survey Rate, beginning at 12:00 Noon (Singapore time) or as soon thereafter as practicable on a Business Day in Mumbai (or a calendar day that would have been a Business Day but for an Unscheduled Holiday), following any 14 calendar day period during which valuation is deferred or postponed (or both).

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

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

II. Use of Survey Results

- SFEMC (itself or through a service provider) will determine the mid-point of each bid-offer pair. The arithmetic mean of the mid-points will be used to deter-

mine the INR Indicative Survey Rate, rounded to the fourth decimal point as described below.

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

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

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

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

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

III. Insufficient Responses

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

IV. INR Indicative Survey Rate Publication

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

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

- The response of each Participating Bank to the Indicative Survey (bid-offer pair) will be available on the Publication Site at 9:00 a.m. (Singapore time) on the first

Business Day in Mumbai (or calendar day that would have been a Business Day but for an Unscheduled Holiday) following the Business Day on which the relevant INR Indicative Survey Rate is published, or as soon thereafter as practicable.

V. Discontinuing the INR Indicative Survey

- The INR Indicative Survey will be discontinued (i) on the calendar day first following the Business Day in Mumbai on which the INR RBIB (INR 01) is available for the determination of a Settlement Rate, or (ii) on the calendar day first following polling for the INR Indicative Survey that results in Insufficient Responses for three consecutive polling days. Notwithstanding the foregoing, nothing herein will be construed to prevent SFEMC from continuing or re-initiating the INR Indicative Survey at an appropriate time.

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

VI. Amendments to the Methodology

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

VII. Disclaimer

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

Appendix D – Korean Won

2004 Template Terms
Annex A Rate Source Definitions
SFEMC Indicative Survey Methodology

2004 SFEMC, EMTA & FXC Template Terms for KRW/USD Non-Deliverable FX Transaction

General Terms:

Trade Date:	
[Date of Annex A][1]:	
Reference Currency:	KRW
[Notional Amount][2]:	
[Forward Rate][2]:	
[Reference Currency Notional Amount][2]:	
Reference Currency Buyer:	
Reference Currency Seller:	
Settlement Currency:	U.S. Dollars
Settlement Date:	[DATE CERTAIN], *provided*, *however*, that if the Scheduled Valuation Date is adjusted in accordance with the Following Business Day Convention, then the Settlement Date shall be as soon as practicable after the Valuation Date, but in no event later than two Business Days after such date.
Settlement:	Non-Deliverable
Settlement Rate Option:	KRW KFTC18 (KRW02)[3]
Valuation Date:	[DATE CERTAIN] ("Scheduled Valuation Date"), subject to adjustment in accordance with the Preceding Business Day Convention; and in the event of an Unscheduled Holiday, subject to adjustment in accordance with the Following Business Day Convention.

Disruption Events:

Price Source Disruption:	Applicable

Disruption Fallbacks:

1. Valuation Postponement	
2. Fallback Reference Price:	SFEMC KRW Indicative Survey Rate (KRW04)[4,5]
3. Fallback Survey Valuation Postponement	
4. Calculation Agent Determination of Settlement Rate	

Other Terms:

"Unscheduled Holiday":	"Unscheduled Holiday" means that a day is not a Business Day and the market was not aware of such fact (by means of a public announcement or by reference to other publicly available information) until a time later than 9:00 a.m. local time in the Principal Financial Center(s) of the Reference Currency two Business Days prior to the Scheduled Valuation Date.
"Deferral Period" for Unscheduled Holiday:	In the event the Scheduled Valuation Date becomes subject to the Following Business Day Convention, and if the Valuation Date has not occurred on or before the 14th consecutive day after the Scheduled Valuation Date (any such period being a "Deferral Period"), then the next day after the Deferral Period that would have been a Business Day but for the Unscheduled Holiday, shall be deemed to be the Valuation Date.
"Valuation Postponement" for Price Source Disruption:	"Valuation Postponement" means, for purposes of obtaining a Settlement Rate, that the Spot Rate will be determined on the Business Day first succeeding the day on which the Price Source Disruption ceases to exist, unless the Price Source Disruption continues to exist (measured from the date that, but for the occurrence of the Price Source Disruption, would have been the Valuation Date) for a consecutive number of calendar days equal to the Maximum Days of Postponement. In such event, the Spot Rate will be determined on the next Business Day after the Maximum Days of Postponement in accordance with the next applicable Disruption Fallback.
"Fallback Survey Valuation Postponement":	"Fallback Survey Valuation Postponement" means that, in the event that the Fallback Reference Price is not available on or before the 3rd Business Day (or day that would have been a Business Day but for an Unscheduled Holiday) succeeding the end of either (i) Valuation Postponement for Price Source Disruption, (ii) Deferral Period for Unscheduled Holiday, or (iii) Cumulative Events, then the Settlement Rate will be determined in accordance with the next applicable Disruption Fallback on such day. For the avoidance of doubt, Cumulative Events, if applicable, does not preclude postponement of valuation in accordance with this provision.

Cumulative Events:	Except as provided below, in no event shall the total number of consecutive calendar days during which either (i) valuation is deferred due to an Unscheduled Holiday, or (ii) a Valuation Postponement shall occur (or any combination of (i) and (ii)), exceed 14 consecutive calendar days in the aggregate. Accordingly, (x) if, upon the lapse of any such 14 day period, an Unscheduled Holiday shall have occurred or be continuing on the day following such period that otherwise would have been a Business Day, then such day shall be deemed to be a Valuation Date, and (y) if, upon the lapse of any such 14 day period, a Price Source Disruption shall have occurred or be continuing on the day following such period on which the Spot Rate otherwise would be determined, then Valuation Postponement shall not apply and the Spot Rate shall be determined in accordance with the next Disruption Fallback.
Maximum Days of Postponement:	14 calendar days
Relevant City for Business Day for Valuation Date:	Seoul
Relevant City for Business Day for Settlement Date:	New York
Calculation Agent:[6]	

ENDNOTES

1. Include only if parties wish to modify the presumption that Annex A is incorporated as amended through the Trade Date.
2. Parties must specify either (a) a Notional Amount and a Reference Currency Notional Amount or (b) a Forward Rate and either a Notional Amount or a Reference Currency Notional Amount.
3. The KRW KFTC18 (KRW02) Rate is published at approximately 5:30 p.m. Seoul time on the Valuation Date.
4. The SFEMC KRW Indicative Survey Rate is determined pursuant to the SFEMC KRW Indicative Survey Rate Methodology dated December 1, 2004.
5. A party may wish to include the following additional provision if such party is or may be a participant in the SFEMC KRW Indicative Survey:

   [Quoting Dealer Disclaimer:]

   The parties acknowledge that one or both parties to this Transaction acting directly or through a branch or an affiliate may be requested to provide a quotation or quotations from time to time for the purpose of determining the SFEMC KRW Indicative Survey Rate and such quotation may affect, materially or otherwise, the settlement of the Transaction.
6. The following may be applicable for inter-dealer trades where parties agree to be Joint Calculation Agents:

   Calculation Agents: Party A and Party B

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

Amended Korean Won Rate Source Definition

Effective as of December 1, 2004, Annex A of the 1998 FX and Currency Option Definitions (the "1998 Definitions") is amended to add a new section, Section 4.5(a)(iii)(C), as follows:

(C) "SFEMC KRW INDICATIVE SURVEY RATE" or "KRW04" each means that the Spot Rate for a Rate Calculation Date will be the Korean Won/U.S. Dollar Specified Rate for U.S. Dollars, expressed as the amount of Korean Won per one U.S. Dollar, for settlement in two Business Days, as published on SFEMC's website (*www.sfemc.org*) at approximately 3:30 p.m., Singapore time, or as soon thereafter as practicable, on such Rate Calculation Date. The Spot Rate will be calculated by SFEMC (or a service provider SFEMC may select in its sole discretion) pursuant to the SFEMC KRW Indicative Survey Methodology (which means a methodology, dated as of December 1, 2004, as amended from time to time, for a centralized industry-wide survey of financial institutions that are active participants in the Korean Won/U.S. Dollar markets for the purpose of determining the SFEMC KRW Indicative Survey Rate).

Practitioner's Note:

Parties that specify in confirmations that a particular version of Annex A applies to their trades should reference Annex A effective as of December 1, 2004, if they desire to incorporate the new Korean Won rate source definition into their trades. If parties do not specify in their confirmations a particular version of Annex A, the above Korean Won rate source definition will apply to trades that incorporate the 1998 Definitions and have a trade date on or after December 1, 2004.

Singapore Foreign Exchange Market Committee ("SFEMC")
KRW Indicative Survey Rate Methodology
Dated as of December 1, 2004

Capitalized terms not defined below are defined in the 1998 FX and Currency Option Definitions as published by the International Swaps and Derivatives Association, EMTA, Inc. and the Foreign Exchange Committee, or in the 2004 SFEMC, EMTA & FXC Template Terms for KRW/USD Non-Deliverable FX Transaction.

I. The SFEMC KRW Indicative Survey

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

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

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

II. Use of Survey Results

- SFEMC (itself or through a service provider) will determine the mid-point of each bid-offer pair. The arithmetic mean of the mid-points will be used to deter-

mine the KRW Indicative Survey Rate, rounded to the fourth decimal point as described below.

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

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

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

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

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

III. Insufficient Responses

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

IV. KRW Indicative Survey Rate Publication

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

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

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

V. Discontinuing the KRW Indicative Survey

- The KRW Indicative Survey will be discontinued (i) on the calendar day first following the Business Day in Seoul on which the KRW KFTC18 (KRW 02) is available for the determination of a Settlement Rate, or (ii) on the calendar day first following polling for the KRW Indicative Survey that results in Insufficient Responses for three consecutive polling days. Notwithstanding the foregoing, nothing herein will be construed to prevent SFEMC from continuing or re-initiating the KRW Indicative Survey at an appropriate time.

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

VI. Amendments to the Methodology

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

VII. Disclaimer

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

Appendix E – Philippine Peso

2004 Template Terms
Annex A Rate Source Definitions
SFEMC Indicative Survey Methodology

2004 SFEMC, EMTA & FXC Template Terms for PHP/USD Non-Deliverable FX Transaction

General Terms:

Trade Date:	
[Date of Annex A][1]:	
Reference Currency:	PHP
[Notional Amount][2]:	
[Forward Rate][2]:	
[Reference Currency Notional Amount][2]:	
Reference Currency Buyer:	
Reference Currency Seller:	
Settlement Currency:	U.S. Dollars
Settlement Date:	[DATE CERTAIN], *provided*, *however*, that if the Scheduled Valuation Date is adjusted in accordance with the Following Business Day Convention, then the Settlement Date shall be as soon as practicable after the Valuation Date, but in no event later than one Business Day after such date.
Settlement:	Non-Deliverable
Settlement Rate Option:	PHP PHPESO (PHP01)[3]
Valuation Date:	[DATE CERTAIN] ("Scheduled Valuation Date"), subject to adjustment in accordance with the Preceding Business Day Convention; and in the event of an Unscheduled Holiday, subject to adjustment in accordance with the Following Business Day Convention.

Disruption Events:

Price Source Disruption:	Applicable

Disruption Fallbacks:

1. Valuation Postponement	
2. Fallback Reference Price:	SFEMC PHP Indicative Survey Rate (PHP05)[4,5]
3. Fallback Survey Valuation Postponement	
4. Calculation Agent Determination of Settlement Rate	

Other Terms:

"Unscheduled Holiday":	"Unscheduled Holiday" means that a day is not a Business Day and the market was not aware of such fact (by means of a public announcement or by reference to other publicly available information) until a time later than 9:00 a.m. local time in the Principal Financial Center(s) of the Reference Currency two Business Days prior to the Scheduled Valuation Date.
"Deferral Period" for Unscheduled Holiday:	In the event the Scheduled Valuation Date becomes subject to the Following Business Day Convention, and if the Valuation Date has not occurred on or before the 14th consecutive day after the Scheduled Valuation Date (any such period being a "Deferral Period"), then the next day after the Deferral Period that would have been a Business Day but for the Unscheduled Holiday, shall be deemed to be the Valuation Date.
"Valuation Postponement" for Price Source Disruption:	"Valuation Postponement" means, for purposes of obtaining a Settlement Rate, that the Spot Rate will be determined on the Business Day first succeeding the day on which the Price Source Disruption ceases to exist, unless the Price Source Disruption continues to exist (measured from the date that, but for the occurrence of the Price Source Disruption, would have been the Valuation Date) for a consecutive number of calendar days equal to the Maximum Days of Postponement. In such event, the Spot Rate will be determined on the next Business Day after the Maximum Days of Postponement in accordance with the next applicable Disruption Fallback.
"Fallback Survey Valuation Postponement":	"Fallback Survey Valuation Postponement" means that, in the event that the Fallback Reference Price is not available on or before the 3rd Business Day (or day that would have been a Business Day but for an Unscheduled Holiday) succeeding the end of either (i) Valuation Postponement for Price Source Disruption, (ii) Deferral Period for Unscheduled Holiday, or (iii) Cumulative Events, then the Settlement Rate will be determined in accordance with the next applicable Disruption Fallback on such day. For the avoidance of doubt, Cumulative Events, if applicable, does not preclude postponement of valuation in accordance with this provision.

Cumulative Events:	Except as provided below, in no event shall the total number of consecutive calendar days during which either (i) valuation is deferred due to an Unscheduled Holiday, or (ii) a Valuation Postponement shall occur (or any combination of (i) and (ii)), exceed 14 consecutive calendar days in the aggregate. Accordingly, (x) if, upon the lapse of any such 14 day period, an Unscheduled Holiday shall have occurred or be continuing on the day following such period that otherwise would have been a Business Day, then such day shall be deemed to be a Valuation Date, and (y) if, upon the lapse of any such 14 day period, a Price Source Disruption shall have occurred or be continuing on the day following such period on which the Spot Rate otherwise would be determined, then Valuation Postponement shall not apply and the Spot Rate shall be determined in accordance with the next Disruption Fallback.
Maximum Days of Postponement:	14 calendar days
Relevant City for Business Day for Valuation Date:	Manila
Relevant City for Business Day for Settlement Date:	New York
Calculation Agent:[6]	

ENDNOTES

1. Include only if parties wish to modify the presumption that Annex A is incorporated as amended through the Trade Date.
2. Parties must specify either (a) a Notional Amount and a Reference Currency Notional Amount or (b) a Forward Rate and either a Notional Amount or a Reference Currency Notional Amount.
3. The PHP PHPESO (PHP01) Rate is published at approximately 12:30 p.m. Manila time on the Valuation Date.
4. The SFEMC PHP Indicative Survey Rate is determined pursuant to the SFEMC PHP Indicative Survey Rate Methodology dated December 1, 2004.
5. A party may wish to include the following additional provision if such party is or may be a participant in the SFEMC PHP Indicative Survey:

   [Quoting Dealer Disclaimer:]

   The parties acknowledge that one or both parties to this Transaction acting directly or through a branch or an affiliate may be requested to provide a quotation or quotations from time to time for the purpose of determining the SFEMC PHP Indicative Survey Rate and such quotation may affect, materially or otherwise, the settlement of the Transaction.
6. The following may be applicable for inter-dealer trades where parties agree to be Joint Calculation Agents:

   Calculation Agents: Party A and Party B

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

Amended Philippine Peso Rate Source Definition

Effective as of December 1, 2004, Annex A of the 1998 FX and Currency Option Definitions (the "1998 Definitions") is amended to add a new section, Section 4.5(a)(iv)(E), as follows:

(E) "SFEMC PHP INDICATIVE SURVEY RATE" or "PHP05" each means that the Spot Rate for a Rate Calculation Date will be the Philippine Peso/U.S. Dollar Specified Rate for U.S. Dollars, expressed as the amount of Philippine Pesos per one U.S. Dollar, for settlement in one Business Day, as published on SFEMC's website (*www.sfemc.org*) at approximately 3:30 p.m., Singapore time, or as soon thereafter as practicable, on such Rate Calculation Date. The Spot Rate will be calculated by SFEMC (or a service provider SFEMC may select in its sole discretion) pursuant to the SFEMC PHP Indicative Survey Methodology (which means a methodology, dated as of December 1, 2004, as amended from time to time, for a centralized industry-wide survey of financial institutions that are active participants in the Philippine Peso/U.S. Dollar markets for the purpose of determining the SFEMC PHP Indicative Survey Rate).

Practitioner's Note:

- *Parties that specify in confirmations that a particular version of Annex A applies to their trades should reference Annex A effective as of December 1, 2004, if they desire to incorporate the new Philippine Peso rate source definition into their trades. If parties do not specify in their confirmations a particular version of Annex A, the above Philippine Peso rate source definition will apply to trades that incorporate the 1998 Definitions and have a trade date on or after December 1, 2004.*

Singapore Foreign Exchange Market Committee ("SFEMC")
PHP Indicative Survey Rate Methodology
Dated as of December 1, 2004

Capitalized terms not defined below are defined in the 1998 FX and Currency Option Definitions as published by the International Swaps and Derivatives Association, EMTA, Inc. and the Foreign Exchange Committee, or in the 2004 SFEMC, EMTA & FXC Template Terms for PHP/USD Non-Deliverable FX Transaction.

I. The SFEMC PHP Indicative Survey

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

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

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

II. Use of Survey Results

- SFEMC (itself or through a service provider) will determine the mid-point of each bid-offer pair. The arithmetic mean of the mid-points will be used to deter-

mine the PHP Indicative Survey Rate, rounded to the fourth decimal point as described below.

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

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

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

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

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

III. Insufficient Responses

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

IV. PHP Indicative Survey Rate Publication

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

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

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

V. Discontinuing the PHP Indicative Survey

- The PHP Indicative Survey will be discontinued (i) on the calendar day first following the Business Day in Manila on which the PHP PHPESO (PHP 01) is available for the determination of a Settlement Rate, or (ii) on the calendar day first following polling for the PHP Indicative Survey that results in Insufficient Responses for three consecutive polling days. Notwithstanding the foregoing, nothing herein will be construed to prevent SFEMC from continuing or re-initiating the PHP Indicative Survey at an appropriate time.

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

VI. Amendments to the Methodology

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

VII. Disclaimer

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

Appendix F – Taiwanese Dollar

2004 Template Terms
Annex A Rate Source Definitions
SFEMC Indicative Survey Methodology

2004 SFEMC, EMTA & FXC Template Terms for TWD/USD Non-Deliverable FX Transaction

General Terms:

Trade Date:	
[Date of Annex A][1]:	
Reference Currency:	TWD
[Notional Amount][2]:	
[Forward Rate][2]:	
[Reference Currency Notional Amount][2]:	
Reference Currency Buyer:	
Reference Currency Seller:	
Settlement Currency:	U.S. Dollars
Settlement Date:	[DATE CERTAIN], *provided, however,* that if the Scheduled Valuation Date is adjusted in accordance with the Following Business Day Convention, then the Settlement Date shall be as soon as practicable after the Valuation Date, but in no event later than two Business Days after such date.
Settlement:	Non-Deliverable
Settlement Rate Option:	TWD TAIFX1 (TWD03)[3]
Valuation Date:	[DATE CERTAIN] ("Scheduled Valuation Date"), subject to adjustment in accordance with the Preceding Business Day Convention; and in the event of an Unscheduled Holiday, subject to adjustment in accordance with the Following Business Day Convention.

Disruption Events:

Price Source Disruption: Applicable

Disruption Fallbacks:

1. Valuation Postponement
2. Fallback Reference Price: SFEMC TWD Indicative Survey Rate (TWD04)[4,5]
3. Fallback Survey Valuation Postponement
4. Calculation Agent Determination of Settlement Rate

Other Terms:

"Unscheduled Holiday":	"Unscheduled Holiday" means that a day is not a Business Day and the market was not aware of such fact (by means of a public announcement or by reference to other publicly available information) until a time later than 9:00 a.m. local time in the Principal Financial Center(s) of the Reference Currency two Business Days prior to the Scheduled Valuation Date.
"Deferral Period" for Unscheduled Holiday:	In the event the Scheduled Valuation Date becomes subject to the Following Business Day Convention, and if the Valuation Date has not occurred on or before the 14th consecutive day after the Scheduled Valuation Date (any such period being a "Deferral Period"), then the next day after the Deferral Period that would have been a Business Day but for the Unscheduled Holiday, shall be deemed to be the Valuation Date.
"Valuation Postponement" for Price Source Disruption:	"Valuation Postponement" means, for purposes of obtaining a Settlement Rate, that the Spot Rate will be determined on the Business Day first succeeding the day on which the Price Source Disruption ceases to exist, unless the Price Source Disruption continues to exist (measured from the date that, but for the occurrence of the Price Source Disruption, would have been the Valuation Date) for a consecutive number of calendar days equal to the Maximum Days of Postponement. In such event, the Spot Rate will be determined on the next Business Day after the Maximum Days of Postponement in accordance with the next applicable Disruption Fallback.
"Fallback Survey Valuation Postponement":	"Fallback Survey Valuation Postponement" means that, in the event that the Fallback Reference Price is not available on or before the 3rd Business Day (or day that would have been a Business Day but for an Unscheduled Holiday) succeeding the end of either (i) Valuation Postponement for Price Source Disruption, (ii) Deferral Period for Unscheduled Holiday, or (iii) Cumulative Events, then the Settlement Rate will be determined in accordance with the next applicable Disruption Fallback on such day. For the avoidance of doubt, Cumulative Events, if applicable, does not preclude postponement of valuation in accordance with this provision.

Cumulative Events:	Except as provided below, in no event shall the total number of consecutive calendar days during which either (i) valuation is deferred due to an Unscheduled Holiday, or (ii) a Valuation Postponement shall occur (or any combination of (i) and (ii)), exceed 14 consecutive calendar days in the aggregate. Accordingly, (x) if, upon the lapse of any such 14 day period, an Unscheduled Holiday shall have occurred or be continuing on the day following such period that otherwise would have been a Business Day, then such day shall be deemed to be a Valuation Date, and (y) if, upon the lapse of any such 14 day period, a Price Source Disruption shall have occurred or be continuing on the day following such period on which the Spot Rate otherwise would be determined, then Valuation Postponement shall not apply and the Spot Rate shall be determined in accordance with the next Disruption Fallback.
Maximum Days of Postponement:	14 calendar days
Relevant City for Business Day for Valuation Date:	Taipei
Relevant City for Business Day for Settlement Date:	New York
Calculation Agent:[6]	

ENDNOTES

1. Include only if parties wish to modify the presumption that Annex A is incorporated as amended through the Trade Date.
2. Parties must specify either (a) a Notional Amount and a Reference Currency Notional Amount or (b) a Forward Rate and either a Notional Amount or a Reference Currency Notional Amount.
3. The TWD TAIFX1 (TWD03) Rate is published at approximately 11:00 a.m. Taipei time on the Valuation Date.
4. The SFEMC TWD Indicative Survey Rate is determined pursuant to the SFEMC TWD Indicative Survey Rate Methodology dated December 1, 2004.
5. A party may wish to include the following additional provision if such party is or may be a participant in the SFEMC TWD Indicative Survey:

   [Quoting Dealer Disclaimer:]

   The parties acknowledge that one or both parties to this Transaction acting directly or through a branch or an affiliate may be requested to provide a quotation or quotations from time to time for the purpose of determining the SFEMC TWD Indicative Survey Rate and such quotation may affect, materially or otherwise, the settlement of the Transaction.
6. The following may be applicable for inter-dealer trades where parties agree to be Joint Calculation Agents:

   Calculation Agents: Party A and Party B

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

Amended Taiwanese Dollar Rate Source Definition

Effective as of December 1, 2004, Annex A of the 1998 FX and Currency Option Definitions (the "1998 Definitions") is amended to add a new section, Section 4.5(a)(v)(D), and to delete Sections 4.5(a)(v)(A) and 4.5(a)(v)(C) in their entirety and replace them as follows:

(A) "TWD TELERATE 6161" or "TWD01" each mean that the Spot Rate for a Rate Calculation Date will be the Taiwanese Dollar/U.S. Dollar spot rate, expressed as the amount of Taiwanese Dollars per one U.S. Dollar, for settlement in two Business Days, reported by the Taipei Forex Inc. which appears on the Telerate Page 6161 under the heading "Spot" as of 11:00 a.m., Taipei time, on that Rate Calculation Date, or if no rate appears as of 11:00 a.m., Taipei time, the rate that first appears in any of the next succeeding 15 minute intervals after such time, up to and including 12:00 noon, Taipei time, on that Rate Calculation Date.

(C) "TWD TAIFX1" or "TWD03" each mean that the Spot Rate for a Rate Calculation Date will be the Taiwanese Dollar/U.S. Dollar spot rate, expressed as the amount of Taiwanese Dollars per one U.S. Dollar, for settlement in two Business Days, reported by the Taipei Forex Inc. which appears on the Reuters Screen TAIFX1 Page under the heading "Spot" as of 11:00 a.m. Taipei time, on that Rate Calculation Date, or if no rate appears as of 11:00 a.m., Taipei time, the rate that first appears in any of the next succeeding 15 minute intervals after such time, up to and including 12:00 noon, Taipei time on that Rate Calculation Date.

(D) "SFEMC TWD INDICATIVE SURVEY RATE" or "TWD04" each means that the Spot Rate for a Rate Calculation Date will be the Taiwanese Dollar/U.S. Dollar Specified Rate for U.S. Dollars, expressed as the amount of Taiwanese Dollars per one U.S. Dollar, for settlement in two Business Days, as published on SFEMC's website (*www.sfemc.org*) at approximately 3:30 p.m., Singapore time, or as soon thereafter as practicable, on such Rate Calculation Date. The Spot Rate will be calculated by SFEMC (or a service provider SFEMC may select in its sole discretion) pursuant to the SFEMC TWD Indicative Survey Methodology (which means a methodology, dated as of December 1, 2004, as amended from time to time, for a centralized industry-wide survey of financial institutions that are active participants in the Taiwanese Dollar/U.S. Dollar markets for the purpose of determining the SFEMC TWD Indicative Survey Rate).

Practitioner's Notes:

- *"TWD Telerate 6161" or "TWD01" and "TWD TAIFX1" or "TWD03" have been revised to permit a limited delay in reporting the Spot Rate of the first trade that takes place through the Taipei Forex Inc. The first trade usually takes place at 11 a.m. Taipei Time, and its Spot Rate is posted in the first 15-minute segment. However, the first trade could take place and its Spot Rate could be posted at a later 15-minute interval. The rate source definitions incorporate the possibility of the first appearance of the Spot Rate in* *any succeeding 15-minute interval from 11 a.m. up to and including 12 Noon Taipei Time. Noon Taipei Time was deemed to be an appropriate cut-off point, because failure of a trade to take place through Taipei Forex Inc. by this time would indicate a disruption in the local market. If a Spot Rate is not posted by 12 Noon Taipei Time on a Valuation Date, a Price Source Disruption would be triggered as provided in the 1998 Definitions and the relevant confirmation.*

- *"Parties that specify in confirmations that a particular version of Annex A applies to their trades should reference Annex A effective as of December 1, 2004, if they desire to incorporate any or all of the revised Taiwanese Dollar rate source definitions into their trades. If parties do not specify in their confirmations a particular version of Annex A, the above Taiwanese Dollar rate source definitions will apply to trades that incorporate the 1998 Definitions and have a trade date on or after December 1, 2004.*

Singapore Foreign Exchange Market Committee ("SFEMC") TWD Indicative Survey Rate Methodology Dated as of December 1, 2004

Capitalized terms not defined below are defined in the 1998 FX and Currency Option Definitions as published by the International Swaps and Derivatives Association, EMTA, Inc. and the Foreign Exchange Committee, or in the 2004 SFEMC, EMTA & FXC Template Terms for TWD/USD Non-Deliverable FX Transaction.

I. The SFEMC TWD Indicative Survey

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

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

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

II. Use of Survey Results

- SFEMC (itself or through a service provider) will determine the mid-point of each bid-offer pair. The arithmetic mean of the mid-points will be used to deter-

mine the TWD Indicative Survey Rate, rounded to the fourth decimal point as described below.

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

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

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

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

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

III. Insufficient Responses

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

IV. TWD Indicative Survey Rate Publication

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

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

- The response of each Participating Bank to the Indicative Survey (bid-offer pair) will be available on the Publication Site at 9:00 a.m. (Singapore time) on the first Business Day in Taipei (or calendar day that would have been a Business Day but for an Unscheduled Holiday) following the Business Day on which the relevant

TWD Indicative Survey Rate is published, or as soon thereafter as practicable.

V. Discontinuing the TWD Indicative Survey

- The TWD Indicative Survey will be discontinued (i) on the calendar day first following the Business Day in Taipei on which the TWD TAIFX1 (TWD 03) is available for the determination of a Settlement Rate, or (ii) on the calendar day first following polling for the TWD Indicative Survey that results in Insufficient Responses for three consecutive polling days. Notwithstanding the foregoing, nothing herein will be construed to prevent SFEMC from continuing or re-initiating the TWD Indicative Survey at an appropriate time.

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

VI. Amendments to the Methodology

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

VII. Disclaimer

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

Guidelines for Foreign Exchange Trading Activities

2004 Changes

Guidelines for Foreign Exchange Trading Activities

2004 Changes

The Foreign Exchange Committee published its first version of the *Guidelines for Foreign Exchange Trading Activities* in 1979. As the industry evolves and trading processes change, the Committee periodically updates this paper. In 2004, the changes indicated below were made to the *Guidelines*. The most recent version of the *Guidelines* can always be found on the Foreign Exchange Committee's public website at <www.newyorkfed.org/fxc>.

How to Resolve Trade-Related Problems

- Amend Resolution section, first paragraph, to read: 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.*

- Add footnote number 8: 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).

Dealing with Unnamed Counterparties

- Revise the section to read:

  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. Such practices constrain a dealer's ability to assess the creditworthiness of its 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, and 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. Specifically, investment advisors and foreign exchange intermediaries should develop a process to disclose client names to a dealer's credit, legal, and compliance functions before the execution of foreign exchange trades. In turn, 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 adopted in other markets.

- Add footnote number 10: 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).

- Add footnote number 11: 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 at <www .newyorkfed.org/fxc>. Other industry groups are also actively discouraging this practice in regional codes of conduct and best practices. The Bank of England's Foreign Exchange Joint Standing Committee revised its Code of Conduct for Non-investment Products, a reference source used for regulatory review of financial institutions and investment managers in the United Kingdom, to include best practices similar to those outlined above.

Management of Operational Risk in Foreign Exchange

2004 Changes

Management of Operational Risk in Foreign Exchange

2004 Changes

In 1996, the Foreign Exchange Committee published its first version of *Management of Operational Risk in Foreign Exchange*, or the *Sixty Best Practices.* As the industry evolves and trading processes change, the Committee periodically updates this paper. In 2004, the changes indicated below have been introduced to the *Sixty Best Practices*. The most recent version of the *Sixty Best Practices* can always be found on the Foreign Exchange Committee's public website at <www.newyorkfed.org/fxc>.

Best Practice no. 12:
Closely Monitor Off-Market and Deep-in-the-Money Transactions

Amend the first paragraph to state: All dealer institutions that permit requests for historical rate rollovers (HRRs) should have written procedures to guide their use and should detail the added controls required in the trading and reporting of off-market transactions. Operational responsibilities should be clearly defined in regard to monitoring, reporting, and special confirmations, if any are needed. Such special confirmations may be necessary to identify the market forward rate in effect when the HRR was executed. *The sale of deep-in-the-money options warrants special attention and specific procedures applicable to sales and trading staff (and, if necessary, senior management).*

Add a final paragraph to read: *The sale of deep-in-the-money options warrants special attention and specific procedures applicable to sales and trading staff (and, if necessary, senior management). There may be legitimate reasons for the sale of such* *options—for example, the "sell back" of an option or the implied delta within a separate derivatives product. However, it should also be recognized that the sale of deep-in-the-money options can be used to exploit weaknesses in a counterparty's revaluation or accounting process that could create erroneous results. Procedures should ensure an appropriate level of review—if necessary, by senior trading management or risk management outside the sales and trading areas—to guard against potential legal, reputational, and other risks.*

Best Practice no. 41:
Conduct Daily Position and P&L Reconciliation

Revise the final sentence of the second paragraph to read: Because a discrepancy in P&L between sales and trading and operations can indicate a difference in positions or market parameters (that is, rates or prices), all differences should be *reported, investigated, and resolved in a timely manner.*

Best Practice no. 42:
Conduct Daily Position Valuation

Amend the fourth paragraph to read: Illiquid markets present additional risk to a bank because illiquid instruments are infrequently traded, making them difficult to price. Often, it is hard for a bank to obtain market quotes, thereby preventing timely and consistent position monitoring. P&L may be distorted and risk may not be properly managed. In such instances, a bank should seek to obtain quotes from other counterparties active in the market. Management should be aware of these procedures so that they may effectively manage and evaluate illiquid market positions. These procedures allow a bank to mark to market its positions and to evaluate associated risks. *All market participants should be aware that an FX option portfolio is not effectively marked to market unless the valuation reflects the shape of the volatility curve. With consideration given to the size of the portfolio and daily activity, positions should, whenever possible, be revalued to reflect the "smile effect" when the firm wishes to mark to market. Where appropriate, firms should reserve against liquidity and pricing risk.*

Best Practice no. 43:
Review Trade Prices for Off-Market Rates

Revise the first paragraph to state: Trade prices for both *internal and external* trades should be independently reviewed to ensure reasonableness within the market prices that existed on the trade date.

Best Practice no. 52:
Ensure Proper Model Sign-off and Implementation

Amend the first paragraph to read: Quantitative models often support FX trading activities. As a result, their implementation and management should be a coordinated effort among the various FX business lines. Model implementation and maintenance should ensure that all FX business lines (sales and trading, operations, financial control, risk control, technology, audit, and others) approve, support, and understand the model purpose and capabilities, as well as the roles and responsibilities of each business line. Further, to maintain appropriate segregation of duties, *model validation,* model technical development, and data input and output reporting should *all* be performed independently from sales and trading.

Best Practice no. 54:

Establish Strong Independent Audit/Risk Control Groups

Revise the first paragraph to state: Market participants should have sophisticated and independent audit/risk control groups. It is recommended that market participants perform rigorous self-assessments and publish regular reporting of such to management, the business line, and audit/risk control groups. *Firms should implement policies and procedures that enable employees to raise concerns anonymously.*

Ethics, Best Practices, and Self-Regulation:

A Crossroads for the Global Foreign Exchange Market

A speech presented by **Mark Snyder**, Chair, Foreign Exchange Committee, at the **FX Week USA 2004 Congress**

July 13, 2004

Ethics, Best Practices, and Self-Regulation:

A Crossroads for the Global Foreign Exchange Market

Introduction

I am honored to have participated in the work of the Foreign Exchange Committee for the past five years and to have been named its Chairman this past January. And I am very pleased that the organizers of this event have seen fit to recognize the efforts of our Committee to improve the integrity and functioning of the global foreign exchange (FX) market.

I'd like to acknowledge in particular David Puth of JP Morgan Chase, who preceded me as the Committee Chairman, and Dino Kos and his team at the Federal Reserve Bank of New York, who provide invaluable infrastructure, inputs, and a home-away-from-home for our Committee.

In my comments today, I have three objectives:

- First, I'd like to reflect on some of the "bumps in the road" that our industry has endured over the past couple years—large FX-driven losses due to a host of weak management practices and trader fraud, as well as criminal prosecutions and the like—and suggest that in any capital market, particularly in an unregulated market such as foreign exchange, personal, corporate, and industrywide ethics matter.

- Second, I'd like to reiterate the critical importance of industry best practices and acquaint or reacquaint you with the work of our Committee in this context.

- Finally, I'd like to consider the very special role of foreign exchange as an unregulated financial market—self-governed, supervised, but not regulated. I'll make the case that this unique circumstance is a great virtue of the currency business as compared with other capital markets, and that this circumstance places on us a special burden to conduct our business in accordance with the highest possible standards.

Ethics Matter

Ethics matter. I believe they matter for reasons not often spoken of in the financial markets because people are more than simply rational economic agents that seek to increase their wealth as their only utility function. If people are to find meaning and significance in their lives, which I believe are two of the key yearnings all people have, then ethical standards must be integrated into their daily commercial decisions. However, if others don't share this same belief about the nature of man, then ethics also matter if only in the sense of enlightened self-interest. In a perfect world, all dealers in the over-the-counter FX market—together with other participants in the wholesale FX market—would embrace best practice guidelines, ethical standards, and governance principles so as to foster the highest possible degrees of trust and confidence in currency trading.

In this imaginary world of commercial integrity above reproach, fraud and massive trading losses resulting from disregard for professional ethics would be a thing of the past. Free market competitive forces would reign supreme, unleashing creative energies and driving robust sustainable volume growth in world currency markets.

It is a market reality that FX plays an integral role in the efficient use of capital and labor allocation. Frankly, through the globalization of finance and trade we help facilitate rising living standards the world over. But it is also a reality that individuals with little regard for the impact of their activities on the welfare of others have been tempted to place short-term personal gain—or sometimes just status, it seems—above the best interests of their firms and of the market at large. But I would make the case that this short-sighted thinking is actually at the expense of their long-term economic self-interest. Foreshortened trading and sales careers, disgorgement of profits, fines, and even prison time, after all, don't add up to sound personal financial or career management.

Trust has an intangible, difficult-to-measure, but nevertheless real market value. But in contemplating the role of trust in a market, I think we have to ask ourselves how trust is established and maintained on a day-to-day basis. Can we legislate trust? Can we legally mandate ethical behavior and effectively enforce it through regulation? We can try, but a world of regulatory enforcers and the combined efforts of the world's police agencies have never been able to eliminate even extreme ethical breaches and criminal enterprise.

No amount of regulation will ever be able to do for us what we must do for ourselves. And I'll return to this idea at the conclusion of my remarks.

For now, I'd like to briefly review a pair of the better-known blowups and scandals seen in our industry over the past few years and note a common theme. These activities—ranging from incompetent risk management to criminal fraud—can be seen as textbook cases of the ethical dilemma that I have just described: the inevitable tension between the quick fix or short-term gain, on the one hand, and the sustainable, profitable long run on the other.

The case of the National Australia Bank (NAB) is a cautionary tale for all of us tempted to maximize returns with practices that stretch the limits of our skills and competence. A regional institution with a steady book of profitable sell-side businesses, NAB appears to have been testing the deep waters of the currency options markets by taking risks for which it was not prepared. Result: 360 million Australian dollars in trading losses; many ruined careers amongst traders, their managers, and corporate executives; and pending civil and criminal penalties.

Decisions made by individual traders were clearly to blame for the events that transpired. But according to media reports, the supposedly "rogue" trading activities had in fact been noticed over time. High turnover among trading and supervisory personnel, coupled with the temptation to garner higher bonuses and perhaps traders' attempts to elevate their market status as "big hitters," appears to have let quantitative risk management erode into undisciplined punting and led senior management to look the other way as the situation drifted toward its inevitable conclusion.

So did internal risk management systems fail? Or did individual firm employees choose to ignore the red warning lights of those systems? At the end of the day, it clearly doesn't matter, because the result is the same: short-term greed and hubris careening out of control and collateral damage for employees beyond the desk, the bottom line of the firm, and the reputation for the FX industry as a whole.

Operation Wooden Nickel was a very different affair. Fraud is fraud. And no amount of regulation will ever prevent those with criminal intent from breaking the law. But as with trading blowups, this scandal—uncovered by a combined task force of the Federal Bureau of Investigation and the Commodity Futures Trading Corporation and resulting in charges against a total of forty-seven people (five from the wholesale FX banking marketplace)—began with a slippery slope that led from less-than-optimal trading practices straight through to criminal conspiracy.

At the heart of the Wooden Nickel incident, which included accusations of fraud against retail investors and against some of the best known and most respected firms in our industry, appears to have been a criminal abuse of a long-tolerated but much discouraged practice of allowing "off-market deals" and the awarding of "points" to grease the skids of commerce between banks and voice brokers. The affidavit filed in the case calls it a "points-for-cash scheme." While those of us in the currency markets can read the affidavit and see that the fraud involved more than the abuse of voice broker points, and that the amount of fraudulent gains was small by wholesale financial market standards, the fact remains that allegations against the over-the-counter foreign exchange market in the affidavit are not flattering. I quote: "Based upon information received from various cooperating witnesses in the forex industry, I have learned that, over a period of at least twenty years, there have existed schemes involving rigged forex trades being passed from corrupt bank traders at large financial institutions to co-conspirators in exchange for kickbacks." Clearly a statement such as this does not do any of us or the industry any good.

The practice of lending points to a broker in order to facilitate the broker's effort to deal at an off-market price in order to hide a trading loss is a vestige of relationship-based trading that is rapidly disappearing as financial institutions adopt more comprehensive risk management and, increasingly, electronic trading.

The Foreign Exchange Committee, for its part, has discouraged the practice for nearly twenty years. As stated in the Committee's 1987 annual report: "Whatever an institution's policy may otherwise be, under no circumstance should a trader request or a broker agree to lend points."

It's hard to be more definitive than that.

On August 1, 1990, the Fed here in New York issued a formal policy statement on the use of points, stating that "ineffective policies, procedures, and controls over disputed contracts by a financial institution can result in inaccurate records, misleading reports filed with regulatory and tax authorities, misapplication of funds, and potential violations of the institution's internal policies and Federal criminal laws regarding gifts to bank personnel. The U.S. bank regulatory agencies have found that the use of 'points' is a practice that can lead to significant abuse and is considered an unsafe and unsound banking practice."

Pretty clear: *It's a bad idea; don't do it.*

I know that there's often a disconnect between the executive offices and the trading floor. And I know that currency dealing is a complex enterprise—it certainly is on my desks. But when armed federal agents are leading your traders away in handcuffs . . . well, it's a little late to take notice! We all need to insist that all traders are clear on what is expected of them, and to ensure that desk managers grasp their oversight duties clearly.

It is disheartening to know that discredited practices are taking place in our industry. And it is, I admit, a little satisfying to see malfeasance punished. But it can't make anyone happy to read something like the harsh assessment that appeared in the November 24, 2003, issue of *Securities Week* magazine: "The over-the-counter forex market is lightly regulated and huge and it has become known as a hotbed of fraud."

Think about that: a hotbed of fraud.

I don't recognize that description as the market in which I work. Another example of concern about ethics in our industry came to my attention in May while sitting on a panel at a conference in London along with a number of my distinguished colleagues. A couple of currency overlay managers commented that a few of their pension fund clients were concerned about which banks their managers were dealing with in the wake of all the "FX market scandals" and had questioned whether they "reviewed the standards of conduct of their FX banks." If this is how those outside our industry see us, then we have some work to do. Simply declaring codes of ethics and the like isn't enough. Frankly, the kind of fraud uncovered in the Wooden Nickel affair might easily have moved under the radar of senior managers—even those committed to sound trading practice.

Much of contemporary financial education and practice is dedicated to wealth maximization as an end in itself. And certainly, making money for one's clients, one's employer, and oneself is a defensible rational practice wholly consistent with fiduciary responsibility. But we need to integrate ethical thinking in the fabric of our workplaces—if for no other reason than that ethical behavior is in the *long-term* economic interest of each and every one of us.

In a recent paper in the *Financial Analysts Journal* entitled "Why Ethics Codes Don't Work," John Dobson persuasively argues that essentially all financial services professionals have been exposed to guidelines on ethics and professional responsibility, yet too many individuals have ignored even the basic principles of these guidelines. The reason for the failure of ethics codes, Dobson suggests, is "acculturation—that is, implicit education into a certain moral value system. Individuals become acculturated by the day-to-day behavior they see around them because they assume such behavior is what is rational and acceptable in the field. In the financial services industry, the implied moral education comes through exposure to the value systems displayed in educational institutions, the industry, and people's firms, particularly by the firm's senior managers. Acculturation comes from observing the actual behavior of other individuals." In other words, unless most people see leaders walking the walk as well as talking the talk around them, all the ethics codes in the world will have little effect.

Sustainable and above-board business practice is rational and wholly consistent with wealth maximization. Organizations composed of ethical professionals excel in long-term financial performance. I'll return to this topic at the conclusion of my remarks.

Clearly, unless we get our own house in order, others outside our industry may try to do it for us. And ignorance is no excuse. The Foreign Exchange Committee is doing an awful lot to ensure that our colleagues in the FX market are aware of what constitutes best practice, what constitutes unwelcome impermissible behavior, and the kind of high standards to which I think we must aspire.

So let me turn to the "blatant self-promotion" section of my remarks and tell you about the Foreign Exchange Committee.

Market Best Practice and the Foreign Exchange Committee

For the past twenty-six years, the Foreign Exchange Committee, composed of representatives of major financial institutions, has met to discuss technical issues and best practices of the FX and international money markets. In partnership with our colleagues in the Federal Reserve Bank of New York, the Foreign Exchange Committee has served as an impartial forum for the exchange of knowledge and information among leading currency practitioners—all with a view to forging a collective vision of the ethics, standards, and practices that we believe would best serve an efficient FX market.

Throughout my involvement with the organization, I have been consistently impressed by the diversity of views held by Committee members and the vigorous exchange of views taking place under its auspices. I can assure you that when the Committee decides upon a technical recommendation or urges a best practice, that consensus view has been well earned through vigorous discussion and an honest exchange of different perspectives. I know that many of you know my current Committee colleagues and those that have served in prior years, and I doubt you would consider any of them shy!

Over the years, the Committee has helped our industry evolve through many tumultuous phases in the growth of financial markets, including the rocky road to European currency union; the interplay between currency, fixed income, and equity markets; market dislocations associated with dramatic currency movements in Europe, Asia, and elsewhere; the Russian debt crisis; the collapse of LTCM (Long-Term Capital Management); the exponential rise in currency and interest-rate derivatives; the proliferation of hedge funds; the dramatic expansion of electronic FX trading; unnamed FX trading; and many other issues.

Throughout, our intention has been to ensure a smooth-functioning and growing currency market. This goal is particularly important because as finance has globalized and capital has moved with steadily increasing volume and speed, the FX market has become mission-critical infrastructure for every other kind of securities market.

The Committee is a voluntary association—our purpose is to make recommendations—and we have no enforcement mandate. One of the Committee's key goals is providing leadership on issues of concern to organizations involved in the wholesale foreign exchange market. It is true that governmental banking supervisors and regulators often look to the Committee's best practice guidance when reviewing firms involved in trading foreign exchange. Thankfully, supervisory enforcement is therefore not part of the Committee's mandate.

We think we have a full agenda simply gathering and disseminating the collective wisdom of the world's most important FX practitioners. To this end, the Foreign Exchange Committee has produced many helpful policy letters, memoranda, papers, and substantial annual reports and documents, most of which are available on our website, which you can find at the site of the New York Fed at <www.newyorkfed.org/fxc>.

Among the Committee documents that are regularly updated as the FX industry evolves, I will highlight three.

Guidelines for Foreign Exchange Trading Activities seeks to provide all participants in the wholesale foreign exchange community with a common set of best practices that will assist them in the conduct of their businesses. Through this document, the Committee seeks to promote market efficiencies and transparency and to facilitate informed decision making.

Guidelines covers trading issues such as time-proven best practices for trading staff; safeguards for trading with electronic brokers; procedures for special trading practices, including historical rate rollovers, stop-loss orders, and switches; and solutions for trade-related problems.

With regard to FX sales, the document stresses the critical importance of "know your customer" (KYC) duties—for example, the avoidance of transactions with unnamed and undisclosed counterparties and diligence in identifying suspicious customer activities, inappropriate customer dealings, and evidence of money laundering.

Guidelines for Foreign Exchange Trading Activities provides suggestions on the effective management of the risks facing every FX trading business—including market, credit, settlement, liquidity, operations, and legal risk. Finally, the document emphasizes the importance of ongoing staff training.

Another important Committee document is the *Management of Operational Risk in Foreign Exchange*—a comprehensive text that details sixty best practices to help manage the revolutionary changes under way in the FX marketplace.

This checklist of best practices seeks to aid industry leaders as they develop internal procedures and guidelines aimed at improving risk management—including direct or indirect loss resulting from inadequate or failed internal procedures, staffing, and systems or from external events. Often, operational risk in the FX context centers on transaction processing, product pricing, and valuation—all of which can hurt a firm's profitability.

The best practices cited in the document are designed to mitigate some of the operational risks common to FX in the belief that if individual market participants take advantage of the Foreign Exchange Committee's counsel, we can reduce systemic risk in the market overall. We encourage FX market participants to use this checklist to periodically review the integrity of their own operations.

The best practices are grouped into sections based upon the seven steps of the FX trade process flow: pre-trade preparation, trade capture, confirmation, netting, settlement, nostro reconciliation, and accounting/financial control processes.

In recognition of the growing variety of institutions involved in foreign exchange today, I would draw your attention to one additional document, *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants*.

This text seeks to share the experience of financial institutions regularly engaged in the FX market with nondealer institutions that may participate in the FX market on a more occasional basis. The document highlights twenty-two issues related to risk awareness for nondealers such as asset managers and hedge funds.

Among the specific topics addressed are KYC concerns and counterparty identification, electronic trading, segregation of duties, timely trade entry, trade confirmation, and prompt resolution of confirmation discrepancies.

This document strongly urges that firms continually evaluate their trading procedures, trade capture systems, accounting policies, operational procedures, and risk management tools. It urges the establishment of codes of conduct in conformity with applicable laws and industry conventions, as well as the documentation and periodic update of policies and procedures.

These documents represent the collected wisdom of hundreds of FX professionals who have guided our industry for a quarter century. I don't think they contain all the answers, and I certainly don't think that a group of us meeting at the New York Fed have either the right or inclination to suggest that FX practitioners all over the world adopt them word for word.

But I think that these guidelines—and others produced by partner Committees in other markets—can serve as a vital blueprint for other industry centers, particularly in emerging economies where cross-border investment and trade are booming and where the currency trade lacks the depth and experience of leading currency centers such as New York and London.

Take these documents,extract their essence, adapt them to your local circumstances and needs, and by all means feel free to engage in our collective conversation so that we can develop our best practices on a global level to our mutual benefit.

Foreign Exchange Committee Agenda

The Foreign Exchange Committee agenda for the coming years is as challenging as it has been at any time in our history. In response to the Wooden Nickel events, today we have issued an updated letter advising against the practice of points. This document can be found on our website as well as the associated updates to the *Guidelines for Foreign Exchange Trading Activities*. We are also looking at the increasingly blurred line between wholesale and retail foreign exchange.

In this connection, we are looking more closely at prime brokerage and at the use of white labeling of electronic FX. For example, in a dealing chain that involves a primary FX bank, secondary banks and/or prime brokers, currency overlay managers, and end-users, who exactly has KYC responsibility?

In addition to exploring these ethical issues, we are continuing work on some post-9/11 initiatives such as contingency planning and operational continuity issues. We are also continuing our collaboration with the Bank of England's Foreign Exchange Joint Standing

Committee and with sister FX committees in Singapore, Canada, Europe, and Japan with regard to unnamed trading activity as it relates to fund managers.

The Foreign Exchange Committee is working with the Foreign Exchange Joint Standing Committee in the United Kingdom to produce an FX volume survey twice a year, given that the universally used turnover survey from the Bank for International Settlements is updated only triennially.

Our Operations Managers Working Group is reviewing the benefits of electronic affirmations and confirmations. The Committee is working with our colleagues in the Financial Markets Lawyers Group on exotic option definitions and on Asian non-deliverable foreign exchange transactions.

Finally, the Foreign Exchange Committee is undertaking a comprehensive communications and outreach program. We are determined to take our message of best practice, ethics, and good governance as far as we can throughout the global currency market. To be frank, we've been better at developing our intellectual assets than in communicating them. So we are committed to making the industry aware of these standards so that no one can deviate from them while claiming that they did not know of their existence.

Self-Regulation and a Healthy Marketplace

The foreign exchange marketplace today is undergoing perhaps its most dynamic and rapid evolution. At the same time, it is playing a more critical role in global capital markets and world trade than ever before. Notwithstanding trading errors and lapses of professional ethics, I would make the case that this diverse, noncentralized, self-regulating marketplace has evolved and flourished as well as any capital market on earth.

Foreign exchange is at the heart of a globalized world in which cross-border trade and investing are critical to fostering high rates of economic growth, sustainable investment returns, and the efficient worldwide allocation of capital and labor. This is a huge responsibility and, for the most part, I think we have lived up to the challenges that we have faced.

Because the FX marketplace is one of the least regulated on earth, interest in introducing regulation to the market is perennial. But there are very good reasons why this idea has never moved beyond the talking stage.

If It Ain't Broke, Don't Fix It

The FX market has withstood the dynamic changes of modern markets well. Currency practitioners, together with central banks, have provided abounding liquidity to other capital markets and to world trade; stimulated the emergence of new technologies, risk approaches, products, and services; and ensured a smooth market environment for the greatest boom in cross-border finance that the world has ever seen.

Volumes have grown exponentially. Margins are razor-thin. Competition is vigorous. Every enterprise on earth—from tiny factories to global asset managers—can obtain the currency they need when and how they need it at transparent prices. These are the attributes of a thriving marketplace.

The Probity, Efficiency, and Ethics of the Foreign Exchange Marketplace Compare Favorably with Those of Other Financial Markets

Yes, we have endured occasional difficulties. But we have never seen anything like the systematic erosion of standards and practices that we've been reading about in world equity markets in the wake of the boom and bust of the 1990s. Equity markets are highly intrusively regulated. And yet they are far from immune from the ethical lapses, mispricing of assets, and fraud that have resulted in disgorgement, fines, and penalties and cost leading financial firms and their customers huge sums of money.

The mutual fund marketplace here in the United States—arguably the most heavily regulated major market in the entire financial services industry—likewise appears to have allowed the widespread embrace of insider information, illegal trading, indefensible sales practices, and the systematic abuse of small investors in the interest of personal gain on the part of traders, fund managers, and even the executive leadership of some of the best-known brands in the fund management industry.

My intention here isn't to disparage the values of other capital markets. But when I read about the supposedly chronic absence of ethical practices in the currency arena, I can't help but reflect that the FX marketplace is arguably the most transparent, efficient, appropriately priced, and liquid financial market on earth.

I think that we're largely doing the right things and delivering a vital service. Of course, it is incumbent on us to keep it that way. And the Foreign Exchange Committee, together with central banks and others in our industry, is working continually to maintain high standards, communicate them to new entrants in our industry, and incorporate them in the DNA of our market culture.

Regulating the Foreign Exchange Market May Well Be Impossible

In truth, the FX market may be unregulatable. It is governed well and it is ably supervised. But the currency market is, by definition, a transnational market. One hundred percent of our volume moves across borders. The only conceivable regulatory approach would involve a supranational agency governed by a board of world central banks attempting to impose standards and practices that would be appropriate for every economy on earth.

Were we to achieve a globally imposed set of standards and practices, the inevitable result would be a regulatory regime based upon the lowest common denominator of market practice. I submit that it would decidedly not be in the interest of the global economy for the deepest, most liquid market on earth to actually reduce the quality of its working infrastructure.

Imposing a regulatory compliance regime on the market would unavoidably lead to an increased cost of doing business, which would in turn expand trading spreads and increase profit margin requirements with negative consequences for every other capital market and for the global economy as a whole.

Self-governance places responsibility for the integrity of our market squarely on our shoulders. In the context of the Basel II accords, this is doubly important. If ethical lapses and bad practice raise the risk premium of our market, our parent institutions will have no choice but to increase our capital-adequacy allocations, with unpredictable consequences.

FX might suddenly change from a relatively low-overhead, "lean and mean" industry with minimal capital requirements into an expensive and less efficient market that would drive firms out of the trade, thereby reducing liquidity, efficiency, and trading diversity. The smothering of this market with intrusive, burdensome regulatory requirements might have a corrosive effect on every other financial market, raising the cost of global trade across the board.

In other words, if we don't keep our house in order, we may witness the permanent alteration of the entire economic predicate of our industry.

The Trust Premium

Let me conclude by reiterating the notion that trustworthy business practices, defensible and transparent dealings, and the like have a real value in the marketplace.

As Fed Chairman Alan Greenspan has often noted, it is incumbent on corporate officers and senior managers to shoulder responsibility for operating their companies in the best long-term interest of their shareholders through business practices that will be respected and rewarded in the marketplace.

Speaking before the 2003 Conference on Bank Structure and Competition, Chairman Greenspan stated: "It is hard to overstate the importance of reputation in a market economy. To be sure, a market economy requires a structure of formal rules . . . but rules cannot substitute for character." Chairman Greenspan described corporate reputations as having "an exceptionally important market value that in principle is capitalized on a balance sheet as goodwill."

Chairman Greenspan went on to say: "We should not be surprised then to see a reemergence of the market value placed on trust and personal reputation in business practice. After the revelations of corporate malfeasance, the market punished the stock prices of those corporations whose behaviors had cast doubt on the reliability of their reputations. Recent allegations on Wall Street of breaches of trust or even legality, if true, could begin to undermine the very basis on which the world's greatest financial markets thrive. Guilty parties should be expeditiously punished. Some practices and rules have outlived their usefulness and require updating. But in so doing, we need to be careful not to undermine the paradigm that has so effectively governed voluntary trade. Rewriting rules that have served us well is fraught with the possibility for collateral damage. I hope and anticipate that trust and integrity again will be amply rewarded in the marketplace as they were in earlier generations."

I believe that these ideas are doubly important in an unregulated over-the-counter financial market such as our own. For the foreign exchange market, the counterparties' word is the essential bond that ties together the entire marketplace. It is in the best interest of us all to ensure that we can promise a high standard of conduct to the other capital markets and global corporations that depend on our services. In this way, the foreign exchange industry—and the firms and individuals that compose it—can earn the trust premium that Chairman Greenspan implies.

Foreign exchange markets are the central nervous system of the global economy. It is up to us to ensure that these markets function in a trustworthy and sustainable manner for the benefit of people all over the world.

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COMMITTEE LETTER • ISSUED JOINTLY WITH THE SINGAPORE FOREIGN EXCHANGE MARKET COMMITTEE

Commenting on the Practice of Trading Foreign Exchange on an Unnamed Basis

February 17, 2004

Dear Market Participant:

The Foreign Exchange Committee and the Singapore Foreign Exchange Market Committee believe that the practice of trading foreign exchange on an unnamed basis, also referred to as undisclosed principal trading, presents an adverse risk to both individual foreign exchange market participants and the broader financial market.

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. Such practices constrain a dealer's ability to assess the creditworthiness of its 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, and heighten the risk of fraud.

While the Committees recognize fund managers' commercial interest in maintaining client confidentiality, they jointly recommend that investment advisors and dealers alike implement measures to eliminate the practice of trading on an unnamed basis. Specifically, investment advisors and foreign exchange intermediaries should develop a process to disclose client names to a dealer's credit, legal, and compliance functions before the execution of foreign exchange trades. In turn, 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. These practices are commonly achieved in other markets through the use of identification codes or similar identifier systems.

Given the high and increasing level of market integration, the Committees recognize the global nature of this issue. Following a joint meeting held in New York on November 6, 2003, the Committees agreed that a collective letter addressing this issue would underscore the importance of eliminating the risks to the financial system posed by unnamed principal trading. The two Committees appreciate and endorse the efforts of the Bank of England's Foreign Exchange Joint Standing Committee, which revised its Code of Conduct for Non-investment Products—a reference source used for regulatory review of financial institutions and investment managers in the United Kingdom—to include best practices similar to those outlined above. To the extent that this practice exists in other over-the-counter markets, we strongly urge other industry groups associated with these markets to discourage the practice of trading on an unnamed basis going forward.

The Committees appreciate your interest in and support of this issue. Additional information on trading on an unnamed basis, as well as information on other efforts of the Committees, is publicly available at <www.newyorkfed.org/fxc> or <www.sfemc.org>.

Very truly yours,

Mark Snyder
Chair
Foreign Exchange Committee

Loh Boon Chye
Chair
Singapore Foreign Exchange
Market Committee

COMMITTEE LETTER

Commenting on the Practice of Issuing Authorization Letters

February 23, 2004

Dear Market Participant:

Member firms of the Foreign Exchange Committee have recently noted that a number of participants in the foreign exchange market are forwarding to dealing firms documentation that includes a number of investment limitations and restrictions affecting that participant's ability to trade and invest. The limitations in this documentation may take a number of forms including, but not limited to, restrictions on particular employees with respect to currency, amounts that may be traded, and type of instrument. This documentation may or may not require that the receiving firm indicate its acceptance of these limitations by returning a signed acknowledgment.

The Committee believes that these attempts to shift to dealing counterparties the burden for monitoring and maintaining compliance with internal procedures and limitations are not consistent with Committee guidance with respect to the responsibilities of wholesale market participants. The Committee has consistently taken the position that wholesale foreign exchange market participants are responsible for ensuring compliance with their own internal policies and procedures. Most notably, the Committee in its 1995 *Principles and Practices for Wholesale Financial Market Transactions* noted that "[A] participant should maintain and enforce internal and compliance procedures designed so that its Transactions are conducted in accordance with applicable legal and regulatory requirements, internal policies, and any specific requirements contained in any agreements applicable to its Transactions." (*Principles and Practices* is available at <www.newyorkfed.org/fxc/annualreports/ar1995/fxar9518.html>.) Parties may agree that one counterparty will, for compensation, offer to monitor a counterparty's investment limits and restrictions. But unilateral attempts to transfer responsibility for adherence to such procedures are not consistent with best practice and, as a matter of law, raise serious issues regarding enforceability.

In the context of electronic trading, the Committee also feels that it is impracticable for participants to attempt to impose the burden of monitoring these limitations on dealing counterparties. The rules generally governing the electronic trading of foreign exchange allow a dealing counterparty to treat orders received through authenticated codes as per se authorized by the participant that has been assigned such codes.

In sum, the Committee believes that letters or other documentation that purport unilaterally to shift the burden of enforcing compliance with internal policies and limitations to a market counterparty, or that may have that effect, are not consistent with best practices in the wholesale foreign exchange market. A market participant may wish to reply to such letters or documentation in the event that such participant has a policy, and wishes to assert that policy, of not agreeing to such letters. These responses may take the form of a communication in which the participant affirms that its receipt of such a letter does not impose any duty on it to monitor compliance with the restrictions set forth in the letter or impose any liability if it fails to do so.

Very truly yours,

Mark Snyder
Chair
Foreign Exchange Committee

COMMITTEE LETTER
Commenting on the Use of Points to Resolve Disputes

July 13, 2004

To the Foreign Exchange Trading Community:

Events last year raised concerns that points remain in use in some quarters of the foreign exchange market. In a statement last December, the Foreign Exchange Committee reminded market participants of the need to ensure that their operations be conducted in accordance with the highest ethical and managerial standards. The Committee also committed to review its current guidance with respect to the issue of the use of points to resolve disputes and to update its market guidance as necessary.

Following a thorough assessment of the Committee's market guidance, the Committee has revised its *Guidelines for Foreign Exchange Trading Activities* to incorporate a specific reference to points and their use. This new language in the *Guidelines* iterates the prior guidance that points are not an appropriate method of dispute resolution and refers readers to the Committee's earlier guidance on points, which we continue to believe reflects best practice in the foreign exchange marketplace. While some jurisdictions may permit the use of points in a regulated environment, the Committee notes as well that the use of points is contrary to bank supervisory guidance in the United States.

The Committee recognizes that trade discrepancies are inevitable. Market participants are encouraged to develop and implement clear policies and procedures for dispute resolution; for example, in many markets difference checks are exchanged. Differences should be referred to senior management for resolution, shifting the dispute from the trading to the institutional level. In the absence of senior management awareness and involvement and a formal resolution process, there is heightened risk that the use of informal mechanisms subject to abuse—such as points—may arise.

The Committee published its first version of the *Guidelines* in 1979 and has modified it frequently since that time. As the industry evolves and trade processes change, the Committee will continue to review the *Guidelines* and its other market guidance on an ongoing basis and will address as needed other practices that potentially adversely affect the integrity of the foreign exchange market. The revised *Guidelines* will be published today and are available on the Committee's website at <www.newyorkfed.org/fxc>.

In addition, the Committee's earlier guidance on points can be found in previous annual reports, also available online.

Very truly yours,

Mark Snyder
Chair
Foreign Exchange Committee

COMMITTEE LETTER • ISSUED JOINTLY WITH THE SINGAPORE FOREIGN EXCHANGE MARKET COMMITTEE AND EMTA, INC.

Announcing Updated Documentation for Asian Non-deliverable Foreign Exchange Transactions

November 1, 2004

Dear Market Participant:

The Singapore Foreign Exchange Market Committee (SFEMC), EMTA, Inc. (EMTA) and the Foreign Exchange Committee (FXC), acting as cosponsors, are pleased to announce the publication of updated documentation for non-deliverable foreign exchange transactions for six Asian currencies. The Tokyo Foreign Exchange Market Committee and the Treasury Markets Forum of Hong Kong support the cosponsors in their publication of the updated documentation for the benefit of market participants.

The cosponsors believe that this revised documentation will enhance efficient settlements across the market for non-deliverable foreign exchange transactions in the event of a long-term disruption in a local market. This project continues the efforts made to improve documentation for non-deliverable foreign exchange transactions used for various Latin American currencies.

Updated standard template terms for non-deliverable foreign exchange transactions for each of CNY, IDR, INR, KRW, PHP, and TWD (the "2004 Templates") are now available for use by market participants with a recommended effective date of December 1, 2004, to ensure marketwide coordination in their adoption. The 2004 Templates are intended to replace in their entirety the template terms for these currencies published by EMTA in 2001.

By separate publication, the International Swaps and Derivatives Association (ISDA), EMTA, and the FXC have published new and amended rate source definitions for Annex A of the *1998 FX and Currency Option Definitions* for the six currencies that are the subject of the 2004 Templates. These new and amended definitions also will have an effective date of December 1, 2004.

The 2004 Templates, the new and amended rate source definitions, and other related documentation are on the websites of the SFEMC, EMTA, and the FXC, as cosponsors, at <www.sfemc.org> (see Market Practice), <www.emta.org> (see Standard Documentation/FX and Derivatives Documentation), and <www.newyorkfed.org/fxc> (see Ongoing Work/FX Options and NDFS).

Highlights of the 2004 Templates include:

1. The current eight-calendar-day Drop-Dead Date in the 2001 Templates is replaced with a longer Deferral Period of fourteen calendar days, to give a local market greater opportunity to resume normalcy following the occurrence of an Unscheduled Holiday. A parallel approach of a fourteen-day period for a Valuation Postponement following the occurrence of a Price Source Disruption is introduced.

2. A new first Fallback Settlement Rate Option is added for purposes of obtaining a market-oriented rate following a fourteen-day Deferral Period or Valuation Postponement. This new Fallback Settlement Rate Option is a survey-based rate quotation, which the SFEMC will sponsor and Telerate will administer. The SFEMC would activate the survey during a market disruption, and participants in the survey (offshore banks) will be asked to quote an indicative rate at that time. Test surveys were conducted by Telerate earlier this year, demonstrating the operational viability of the survey methodologies. The results of the test surveys are posted on the SFEMC's website at <www.sfemc.org/AsianNDF.asp>.

3. To give the Indicative Survey a chance to function when it is commenced, a second fallback rate option is introduced in the 2004 Templates, called Fallback Survey Valuation Postponement. This new term can extend the valuation date of a contract for up to an additional three calendar days (for a total of up to seventeen calendar days of deferral or postponement), to the extent needed to obtain an indicative survey rate quotation based on the required minimum number of responses.

4. Calculation Agent Determination is retained as the final fallback option for determining a rate.

In addition, for the convenience of their constituencies and the marketplace, EMTA and the SFEMC will sponsor the signing of a multilateral amendment for their members and other market participants who wish to amend their outstanding contracts to incorporate the new template terms. For those institutions that wish to participate, information pertaining to the multilateral amendment for such currencies may be found on the websites of EMTA and the Singapore Institute of Banking and Finance (<www.ibf.org.sg>), which is administering the amendment on behalf of the SFEMC.

The cosponsors encourage institutions to use the 2004 Templates in recognition of the benefits that would accrue to the marketplace. They are committed to providing ongoing support to the industry as it continues to improve documentation of non-deliverable foreign exchange transactions to promote smooth market functioning.

Loh Boon Chye
Chair
Singapore Foreign Exchange Market Committee

Michael Chamberlin
Executive Director
EMTA, Inc.

Mark Snyder
Chair
Foreign Exchange Committee

COMMITTEE LETTER

Commenting on Recent Changes to *Management of Operational Risk in Foreign Exchange*

November 5, 2004

Dear Market Participant:

I am writing to announce some recent changes to *Management of Operational Risk in Foreign Exchange*, or the *Sixty Best Practices*. The Foreign Exchange Committee regularly reviews these practices, which were first published in 1996 and updated in 2003, to ensure that they remain relevant and address topical issues. To that end, the Committee recently reassessed the *Sixty Best Practices* in light of the public information related to foreign exchange trading issues experienced at the National Australia Bank in 2001-2003.

From this review, the Committee concluded that adherence to the *Sixty Best Practices* should reduce the possibility of a firm suffering weaknesses like those allegedly found at the National Australia Bank. At the same time, the Committee determined that the *Sixty Best Practices* could benefit from some revisions, specifically the introduction of additional guidance addressing foreign exchange derivatives.

In particular, the Committee notes that the sale of deep-in-the-money options warrants special attention and specific procedures applicable to sales and trading staff. Procedures should ensure an appropriate level of review—if necessary, by senior trading management or risk management outside the sales and trading area—to guard against potential legal, reputational, and other risks. In addition, the Committee emphasizes that a foreign exchange options portfolio is not effectively marked to market unless the valuation reflects the shape of the volatility curve. Further, the Committee recommends that positions should, whenever possible, be revalued to reflect the "smile effect." For the complete outline of the revisions, please see the attached note.

On behalf of the Committee, I encourage you to review the *Sixty Best Practices* with the relevant departments within your organization and, where appropriate, incorporate the recommendations in your firm's internal policies and procedures. As the industry evolves, the Committee will continue to review the *Sixty Best Practices* and its other market guidance and will address as needed other practices that could adversely affect the integrity of the foreign exchange market.

The revised *Sixty Best Practices* is now available on the Committee's website at <www.newyorkfed.org/fxc>, where you can also find more information about the Committee, its recent initiatives, and other published documents.

Mark Snyder
Chair
Foreign Exchange Committee

COMMITTEE OPERATIONS MANAGERS WORKING GROUP LETTER • ISSUED JOINTLY WITH THE LONDON FOREIGN EXCHANGE JOINT STANDING COMMITTEE

Commenting on the Turkish Lira Conversion

December 7, 2004

The London Foreign Exchange Joint Standing Committee Operations Sub-Group (FXJSC Operations Group) and the Foreign Exchange Committee Operations Managers Working Group (FXC Operations Group) are pleased to announce the results of a consultation among members regarding their intentions for processing outstanding foreign exchange trades denominated in Turkish lira to address the conversion of old Turkish lira (TRL) to new Turkish lira as of January 1, 2005. The currency code for the new Turkish lira will be TRY.

The FXJSC Operations Group and the FXC Operations Group encourage market participants to review their outstanding TRL trades bridging the January 1, 2005, cutover. In order to promote a smooth operational transition, the FXJSC Operations Group and the FXC Operations Group suggest that market participants contact their trade counterparties to cancel, rebook, and reconfirm spot and forward TRL trades with a value date after January 1, 2005, as TRY trades with the same original value date. The conversion rate is 1 TRY = 1,000,000 TRL under the Law of the Currency Unit of the Republic of Turkey (Law No. 5083, enacted January 31, 2004).

As always, the FXJSC Operations Group and the FXC Operations Group recognize that all documentation is negotiated and must be amended on a counterparty-by-counterparty basis. For this reason, parties are encouraged to inventory their existing TRL trades and contact counterparties as soon as possible to resolve any issues regarding the scheduled conversion on a mutually satisfactory basis.

The FXJSC Operations Group and the FXC Operations Group also recognize that products other than foreign exchange spot and forward trades may raise different operational issues for the parties to consider in the implementation of mutually satisfactory solutions to the scheduled conversion. Other trade associations, including the International Swaps and Derivatives Association, intend to issue statements to their membership addressing the conversion to TRY.

Turkish authorities have published information on the conversion to TRY at <www.tcmb.gov.tr/yeni/eng/index.html>.

If you have any inquiries regarding this notice, please contact Sumita Ghosh (0044.207.601.5982; e-mail: sumita.ghosh@bankofengland.co.uk) or Laura Huizi (001.212.720.2399; e-mail: laura.huizi@ny.frb.org).

Survey of North American Foreign Exchange Volume

October 2004

ANNOUNCEMENT

Foreign Exchange Committee Releases FX Volume Survey Results

New York, January 24, 2005

The Foreign Exchange Committee today released the results of its inaugural Survey of North American Foreign Exchange Volume. This new survey was conducted in order to provide the market with frequent information on the size and structure of foreign exchange activity in North America. Key findings include:

- average daily volume in traditional foreign exchange instruments (spot transactions, outright forwards, and foreign exchange swaps) totaled $335 billion, and
- average daily volume in over-the-counter foreign exchange options totaled $36 billion.

"Our goal in launching this survey is to help market participants identify emerging trends in foreign exchange", said Mark Snyder, Chair of the Foreign Exchange Committee. "Moreover, we hope that this information will enable market participants to measure and effectively manage the risks associated with this high volume and rapidly evolving industry."

To achieve a representative survey, the Foreign Exchange 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 2004. The Committee also collaborated with the United Kingdom's Foreign Exchange Joint Standing Committee, which conducted a similar survey for the U.K. market over the same time period. The Federal Reserve Bank of New York provided technical support in collecting the data and administering the North American survey.

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 is broken out by four foreign exchange instruments, thirteen currency pairs, four counterparty types, and five execution method categories and is 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 of International Settlements' Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity, given differences in the reporting methodology.

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) providing 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) supporting actions that facilitate greater contractual certainties for all parties active in foreign exchange. The Foreign Exchange Committee was formed in 1978 under the sponsorship of the Federal Reserve Bank of New York.

The results of this survey, together with the list of reporting dealers and explanatory notes, are available online at <www.newyorkfed.org/fxc>. The results of the Foreign Exchange Joint Standing Committee's survey for the U.K. market can be found at <www.bankofengland.co.uk/markets/forex/fxjsc/fxturnresults.pdf>.

The Survey of North American Foreign Exchange Volume will be conducted semiannually in April and October.

Contact: Lynn Mansfield
Telephone: 617-664-1148

Survey of North American Foreign Exchange Volume

October 2004

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 transactions, forwards, swaps, and options that involve the exchange of two currencies. Turnover is defined as the gross value in U.S. dollars of purchases and sales entered into during the reporting period. The data cover a full one-month period 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 volume was obtained by dividing the total reported volume by twenty trading days in the United States in October 2004. There were thirty-one reporting dealers for the October 2004 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 involve 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—the terms depend upon 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: comprises contracts having an original maturity of less than thirty-one calendar days,
- one month to one year: comprises contracts having an original maturity of thirty-one calendar days but no more than one year, and
- more than one year: comprises contracts with an original maturity of greater than one year.

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

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

List of Reporting Dealers

ABN AMRO

Bank of America

Bank of Montreal

The Bank of New York

Bank of Tokyo-Mitsubishi

Barclays Capital

BNP Paribas

Bear Stearns

Citigroup

Canadian Imperial Bank of Commerce

Calyon

CSFB

Deutsche Bank AG

Dresdner Bank AG

Goldman Sachs & Co.

HSBC Bank USA

JP Morgan 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

1. TOTAL FOREIGN EXCHANGE VOLUME

Millions of U.S. Dollars

AVERAGE DAILY VOLUME[a]

Instrument	Current Amount Reported
Spot transactions	168,434
Outright forwards	49,009
Foreign exchange swaps	117,958
Over-the-counter foreign exchange options	36,030
Total	**371,431**

TOTAL MONTHLY VOLUME[a]

Instrument	Current Amount Reported
Spot transactions	3,368,682
Outright forwards	980,187
Foreign exchange swaps	2,359,161
Over-the-counter foreign exchange options	720,607
Total	**7,428,637**

[a]Adjusted to eliminate trades between reporting dealers.

2a. SPOT TRANSACTIONS, Average Daily Volume

Millions of U.S. Dollars

	Counterparty				
Currency Pair	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	Total
U.S. DOLLAR versus					
Euro	14,453	30,718	13,445	4,791	63,407
Japanese yen	5,645	9,660	5,947	2,168	23,420
British pound	3,359	6,294	3,732	4,795	18,180
Canadian dollar	2,662	4,387	2,186	1,538	10,773
Swiss franc	2,459	4,321	2,378	1,155	10,313
Australian dollar	1,356	2,545	2,104	545	6,550
Argentine peso	5	7	5	4	21
Brazilian real	126	159	69	46	400
Colombian peso	48	77	22	22	169
Mexican peso	1,190	3,374	848	417	5,829
All other currencies	970	2,193	4,882	1,432	9,477
EURO versus					
Japanese yen	1,358	2,966	835	391	5,550
British pound	982	1,960	552	291	3,785
Swiss franc	1,044	2,557	366	462	4,429
ALL OTHER CURRENCY PAIRS	967	2,376	1,856	932	6,131
Total[a]	**36,624**	**73,594**	**39,227**	**18,989**	**168,434**

Notes: The table reports notional amounts of average daily volume net of interdealer double-counting. The amounts are averaged over twenty trading days in October.

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

2b. OUTRIGHT FORWARDS, Average Daily Volume
Millions of U.S. Dollars

Currency Pair	Counterparty				Total
	Reporting Dealers	Other Dealers	Other Financial Customers	Nonfinancial Customers	
U.S. DOLLAR versus					
Euro	915	2,745	4,522	3,137	11,319
Japanese yen	638	2,079	4,200	2,074	8,991
British pound	566	707	2,313	1,630	5,216
Canadian dollar	374	611	1,226	1,352	3,563
Swiss franc	355	675	1,599	575	3,204
Australian dollar	210	623	951	488	2,272
Argentine peso	8	13	6	4	31
Brazilian real	233	533	263	67	1,096
Colombian peso	83	286	47	21	437
Mexican peso	233	520	571	325	1,649
All other currencies	578	1,751	2,280	1,306	5,915
EURO versus					
Japanese yen	101	378	564	351	1,394
British pound	42	214	334	287	877
Swiss franc	27	110	156	245	538
ALL OTHER CURRENCY PAIRS	119	646	762	980	2,507
Total[a]	**4,482**	**11,891**	**19,794**	**12,842**	**49,009**

Notes: The table reports notional amounts of average daily volume net of interdealer double-counting. The amounts are averaged over twenty trading days in October.

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

2c. FOREIGN EXCHANGE SWAPS, Average Daily Volume

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Counterparty: Other Dealers	Counterparty: Other Financial Customers	Counterparty: Nonfinancial Customers	Total
U.S. DOLLAR versus					
Euro	8,561	15,447	5,072	4,317	33,398
Japanese yen	6,255	9,628	2,978	1,637	20,498
British pound	3,788	6,836	1,713	1,302	13,639
Canadian dollar	4,302	8,981	2,121	2,202	17,606
Swiss franc	3,051	3,832	1,271	662	8,816
Australian dollar	1,056	3,798	758	569	6,181
Argentine peso	0	0	0	1	1
Brazilian real	24	15	6	2	47
Colombian peso	6	2	2	0	10
Mexican peso	1,945	3,111	513	289	5,858
All other currencies	1,247	6,763	1,619	532	10,161
EURO versus					
Japanese yen	24	131	242	44	441
British pound	9	94	98	134	335
Swiss franc	16	38	48	36	138
ALL OTHER CURRENCY PAIRS	50	283	298	198	829
Total[a]	**30,335**	**58,959**	**16,739**	**11,925**	**117,958**

Notes: The table reports notional amounts of average daily volume net of interdealer double-counting. The amounts are averaged over twenty trading days in October.

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

2d. OVER-THE-COUNTER FOREIGN EXCHANGE OPTIONS, Average Daily Volume

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Counterparty: Other Dealers	Counterparty: Other Financial Customers	Counterparty: Nonfinancial Customers	Total
U.S. DOLLAR versus					
Euro	2,960	3,055	2,995	1,912	10,922
Japanese yen	2,236	2,425	3,730	750	9,141
British pound	291	733	304	428	1,756
Canadian dollar	1,218	1,071	545	487	3,321
Swiss franc	187	312	309	102	910
Australian dollar	281	480	420	88	1,269
Argentine peso	4	4	7	5	20
Brazilian real	52	82	75	60	269
Colombian peso	8	24	6	2	40
Mexican peso	233	949	237	91	1,510
All other currencies	226	314	1,482	169	2,191
EURO versus					
Japanese yen	514	334	267	193	1,308
British pound	102	147	244	97	590
Swiss franc	98	154	370	126	748
ALL OTHER CURRENCY PAIRS	274	402	759	600	2,035
Total[a]	**8,684**	**10,486**	**11,750**	**5,110**	**36,030**

Notes: The table reports notional amounts of average daily volume net of interdealer double-counting. The amounts are averaged over twenty trading days in October.

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

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

Millions of U.S. Dollars

Currency Pair	Execution Method						
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
U.S. DOLLAR versus							
Euro	16,519	33,984	54,704	17,027	23,695	145,929	29,614
Japanese yen	11,238	24,135	22,750	7,457	11,246	76,826	12,054
British pound	2,908	16,568	15,868	4,782	6,669	46,795	8,456
Canadian dollar	7,288	11,267	12,794	3,219	9,254	43,821	7,315
Swiss franc	3,538	6,963	10,776	3,068	4,951	29,295	5,672
Australian dollar	1,957	5,134	6,412	2,395	3,276	19,175	4,329
Argentine peso	22	38	7	4	20	91	34
Brazilian real	411	950	55	172	658	2,246	448
Colombian peso	212	382	15	5	185	799	151
Mexican peso	4,034	5,470	3,346	907	4,691	18,448	1,873
All other currencies	2,778	14,055	4,807	2,326	6,799	30,765	6,452
EURO versus							
Japanese yen	1,942	2,233	3,558	1,408	1,550	10,690	2,582
British pound	772	1,563	3,104	656	629	6,724	2,227
Swiss franc	784	1,410	3,217	596	1,035	7,041	1,851
ALL OTHER CURRENCY PAIRS	3,826	4,321	1,475	1,075	2,215	12,913	3,459
Total[a]	**58,229**	**128,473**	**142,886**	**45,096**	**76,874**	**451,558**	**86,515**

Notes: The amounts reported in the table are averaged over twenty trading days in October and are not adjusted to eliminate trades between reporting dealers. Data for some dealers are estimated.

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

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

Millions of U.S. Dollars

	Execution Method						
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
INSTRUMENT							
Spot transactions	23,933	51,031	84,365	23,861	21,868	205,058	67,030
Outright forwards	4,668	23,823	4,334	10,944	9,721	53,490	13,443
Foreign exchange swaps	15,378	37,928	43,712	9,216	42,060	148,294	3,332
OTC FX options	14,250	15,690	10,475	1,075	3,225	44,715	2,710
Total[a]	**58,229**	**128,472**	**142,886**	**45,096**	**76,874**	**451,557**	**86,515**
COUNTERPARTY							
Reporting dealers	58,229	—	62,122	5,536	40,931	166,818	24,638
Banks/other dealers	—	44,066	74,702	13,533	24,427	156,728	31,469
Other financial customers	—	52,172	4,769	18,047	7,075	82,063	21,060
Nonfinancial customers	—	32,235	1,294	7,980	4,442	45,951	9,348
Total[a]	**58,229**	**128,473**	**142,887**	**45,096**	**76,875**	**451,559**	**86,515**

Notes: The amounts reported in the table are averaged over twenty trading days in October and are not adjusted to eliminate trades between reporting dealers. Data for some dealers are estimated.

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

3a. SPOT TRANSACTIONS, Total Monthly Volume

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Counterparty: Other Dealers	Counterparty: Other Financial Customers	Counterparty: Nonfinancial Customers	Total
U.S. DOLLAR versus					
Euro	289,039	614,340	268,887	95,825	1,268,091
Japanese yen	112,907	193,205	118,945	43,365	468,422
British pound	67,172	125,880	74,630	95,903	363,585
Canadian dollar	53,248	87,744	43,722	30,764	215,478
Swiss franc	49,189	86,418	47,563	23,095	206,265
Australian dollar	27,117	50,909	42,083	10,908	131,017
Argentine peso	97	138	105	75	415
Brazilian real	2,519	3,189	1,374	916	7,998
Colombian peso	953	1,543	450	432	3,378
Mexican peso	23,804	67,470	16,969	8,340	116,583
All other currencies	19,402	43,866	97,636	28,630	189,534
EURO versus					
Japanese yen	27,170	59,318	16,691	7,819	110,998
British pound	19,645	39,206	11,050	5,815	75,716
Swiss franc	20,889	51,147	7,310	9,235	88,581
ALL OTHER CURRENCY PAIRS	19,331	47,517	37,124	18,649	122,621
Total[a]	**732,482**	**1,471,890**	**784,539**	**379,771**	**3,368,682**

Note: The table reports notional amounts of total monthly volume net of interdealer double-counting.

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

3b. OUTRIGHT FORWARDS, Total Monthly Volume

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Counterparty: Other Dealers	Counterparty: Other Financial Customers	Counterparty: Nonfinancial Customers	Total
U.S. DOLLAR versus					
Euro	18,305	54,895	90,425	62,748	226,373
Japanese yen	12,751	41,585	84,002	41,490	179,828
British pound	11,325	14,135	46,265	32,596	104,321
Canadian dollar	7,482	12,213	24,527	27,036	71,258
Swiss franc	7,095	13,493	31,989	11,493	64,070
Australian dollar	4,200	12,462	19,021	9,753	45,436
Argentine peso	166	262	126	85	639
Brazilian real	4,651	10,654	5,261	1,345	21,911
Colombian peso	1,660	5,712	944	425	8,741
Mexican peso	4,659	10,409	11,426	6,491	32,985
All other currencies	11,552	35,024	45,595	26,128	118,299
EURO versus					
Japanese yen	2,011	7,566	11,286	7,026	27,889
British pound	845	4,273	6,688	5,736	17,542
Swiss franc	538	2,199	3,112	4,909	10,758
ALL OTHER CURRENCY PAIRS	2,389	12,922	15,231	19,595	50,137
Total[a]	**89,629**	**237,804**	**395,898**	**256,856**	**980,187**

Note: The table reports notional amounts of total monthly volume net of interdealer double-counting.

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

3c. FOREIGN EXCHANGE SWAPS, Total Monthly Volume

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Counterparty: Other Dealers	Counterparty: Other Financial Customers	Counterparty: Nonfinancial Customers	Total
U.S. DOLLAR versus					
Euro	171,218	308,912	101,415	86,332	667,877
Japanese yen	125,097	192,568	59,563	32,743	409,971
British pound	75,765	136,721	34,251	26,038	272,775
Canadian dollar	86,049	179,611	42,427	44,037	352,124
Swiss franc	61,028	76,636	25,420	13,242	176,326
Australian dollar	21,115	75,960	15,163	11,376	123,614
Argentine peso	7	1	0	26	34
Brazilian real	475	298	130	45	948
Colombian peso	117	39	48	0	204
Mexican peso	38,908	62,226	10,258	5,771	117,163
All other currencies	24,949	135,253	32,389	10,646	203,237
EURO versus					
Japanese yen	481	2,622	4,848	881	8,832
British pound	173	1,881	1,963	2,675	6,692
Swiss franc	330	761	967	727	2,785
ALL OTHER CURRENCY PAIRS	1,009	5,659	5,959	3,952	16,579
Total[a]	**606,721**	**1,179,148**	**334,801**	**238,491**	**2,359,161**

Note: The table reports notional amounts of total monthly volume net of interdealer double-counting.

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

3d. OVER-THE-COUNTER FOREIGN EXCHANGE OPTIONS, Total Monthly Volume

Millions of U.S. Dollars

Currency Pair	Counterparty: Reporting Dealers	Counterparty: Other Dealers	Counterparty: Other Financial Customers	Counterparty: Nonfinancial Customers	Total
U.S. DOLLAR versus					
Euro	59,217	61,116	59,893	38,234	218,460
Japanese yen	44,721	48,502	74,597	15,004	182,824
British pound	5,827	14,668	6,083	8,559	35,137
Canadian dollar	24,359	21,417	10,898	9,749	66,423
Swiss franc	3,732	6,243	6,176	2,050	18,201
Australian dollar	5,617	9,596	8,404	1,763	25,380
Argentine peso	75	70	131	104	380
Brazilian real	1,039	1,632	1,507	1,195	5,373
Colombian peso	153	471	113	34	771
Mexican peso	4,653	18,982	4,746	1,816	30,197
All other currencies	4,519	6,279	29,645	3,371	43,814
EURO versus					
Japanese yen	10,281	6,673	5,342	3,851	26,147
British pound	2,045	2,948	4,889	1,938	11,820
Swiss franc	1,969	3,090	7,395	2,518	14,972
ALL OTHER CURRENCY PAIRS	5,478	8,042	15,185	12,003	40,708
Total[a]	**173,685**	**209,729**	**235,004**	**102,189**	**720,607**

Note: The table reports notional amounts of total monthly volume net of interdealer double-counting.

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

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

Millions of U.S. Dollars

Currency Pair	Execution Method: Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
U.S. DOLLAR versus							
Euro	330,372	679,687	1,094,079	340,539	473,903	2,918,580	592,274
Japanese yen	224,760	482,709	454,998	149,139	224,915	1,536,521	241,075
British pound	58,168	331,351	317,352	95,652	133,384	935,907	169,126
Canadian dollar	145,750	225,348	255,872	64,371	185,080	876,421	146,290
Swiss franc	70,762	139,254	215,511	61,353	99,026	585,906	113,430
Australian dollar	39,148	102,685	128,248	47,897	65,518	383,496	86,579
Argentine peso	438	764	138	73	400	1,813	674
Brazilian real	8,220	18,992	1,107	3,440	13,155	44,914	8,954
Colombian peso	4,239	7,645	296	93	3,704	15,977	3,026
Mexican peso	80,672	109,400	66,914	18,141	93,825	368,952	37,460
All other currencies	55,566	281,101	96,142	46,517	135,980	615,306	129,038
EURO versus							
Japanese yen	38,830	44,651	71,162	28,169	30,997	213,809	51,645
British pound	15,446	31,251	62,078	13,116	12,587	134,478	44,532
Swiss franc	15,682	28,195	64,333	11,912	20,700	140,822	37,025
ALL OTHER CURRENCY PAIRS	76,522	86,423	29,499	21,499	44,309	258,252	69,178
Total[a]	**1,164,575**	**2,569,456**	**2,857,729**	**901,911**	**1,537,483**	**9,031,154**	**1,730,306**

Notes: The amounts reported in the table are not adjusted to eliminate trades between reporting dealers. Data for some dealers are estimated.

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

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

Millions of U.S. Dollars

	Execution Method						
	Interdealer Direct	Customer Direct	Electronic Brokering Systems	Electronic Trading Systems	Voice Broker	Total	Total Number of Trades
INSTRUMENT							
Spot transactions	478,668	1,020,623	1,687,290	477,214	437,369	4,101,164	1,340,605
Outright forwards	93,351	476,468	86,687	218,885	194,425	1,069,816	268,865
Foreign exchange swaps	307,568	758,556	874,248	184,320	841,190	2,965,882	66,638
OTC FX options	284,988	313,809	209,504	21,492	64,499	894,292	54,198
Total[a]	**1,164,575**	**2,569,456**	**2,857,729**	**901,911**	**1,537,483**	**9,031,154**	**1,730,306**
COUNTERPARTY							
Reporting dealers	1,164,575	—	1,242,446	110,713	818,610	3,336,344	492,764
Banks/other dealers	—	881,322	1,494,030	270,666	488,544	3,134,562	629,389
Other financial customers	—	1,043,442	95,383	360,931	141,493	1,641,249	421,193
Non-financial customers	—	644,692	25,870	159,601	88,836	918,999	186,960
Total[a]	**1,164,575**	**2,569,456**	**2,857,729**	**901,911**	**1,537,483**	**9,031,154**	**1,730,306**

Notes: The amounts reported in the table are not adjusted to eliminate trades between reporting dealers. Data for some dealers are estimated.

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

4a. OUTRIGHT FORWARDS, Total Monthly Volume by Maturity

Millions of U.S. Dollars

Currency Pair	Maturity: Less Than One Month	One Month to One Year	More Than One Year
U.S. DOLLAR versus			
Euro	148,074	93,107	3,556
Japanese yen	111,981	78,711	1,948
British pound	60,211	54,460	968
Canadian dollar	41,264	36,382	1,081
Swiss franc	37,426	33,160	570
Australian dollar	25,149	24,217	253
Argentine peso	236	563	4
Brazilian real	17,973	8,129	452
Colombian peso	4,491	5,769	132
Mexican peso	18,881	17,037	1,719
All other currencies	57,095	69,732	3,017
EURO versus			
Japanese yen	21,264	8,570	55
British pound	10,879	7,344	156
Swiss franc	8,812	2,265	210
ALL OTHER CURRENCY PAIRS	37,115	15,141	257
Total[a]	**600,851**	**454,587**	**14,378**

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

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

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

Millions of U.S. Dollars

Currency Pair	Maturity: Less Than One Month	One Month to One Year	More Than One Year
U.S. DOLLAR versus			
Euro	676,731	147,886	14,581
Japanese yen	424,163	101,881	9,015
British pound	245,957	96,919	5,647
Canadian dollar	376,395	55,150	6,619
Swiss franc	198,074	35,751	3,520
Australian dollar	126,021	17,902	793
Argentine peso	5	28	5
Brazilian real	386	822	213
Colombian peso	120	170	28
Mexican peso	126,493	25,406	4,157
All other currencies	202,389	24,216	1,569
EURO versus			
Japanese yen	7,207	1,873	228
British pound	3,944	2,576	350
Swiss franc	2,261	789	61
ALL OTHER CURRENCY PAIRS	9,599	7,167	815
Total[a]	**2,399,745**	**518,536**	**47,601**

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

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

4c. OVER-THE-COUNTER FOREIGN EXCHANGE OPTIONS, Total Monthly Volume by Maturity

Millions of U.S. Dollars

Currency Pair	Maturity: Less Than One Month	One Month to Six Months	More Than Six Months
U.S. DOLLAR versus			
Euro	120,522	136,462	20,795
Japanese yen	75,685	98,233	53,612
British pound	18,738	18,135	4,083
Canadian dollar	45,134	38,844	6,783
Swiss franc	13,079	7,724	1,123
Australian dollar	15,119	14,033	1,845
Argentine peso	164	291	0
Brazilian real	1,316	4,039	1,056
Colombian peso	157	615	150
Mexican peso	17,984	12,418	4,434
All other currencies	32,839	12,757	2,727
EURO versus			
Japanese yen	17,981	14,993	3,447
British pound	6,725	5,860	1,274
Swiss franc	8,501	7,634	802
ALL OTHER CURRENCY PAIRS	14,582	26,216	5,381
Total[a]	**388,526**	**398,254**	**107,512**

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

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

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 on page 167. 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 needed, 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 below for 2004 and 2005 membership) include the Committee's Chair as well as several longstanding members of the Committee.

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

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

In planning for the new year and considering new individuals for membership, the subcommittee 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 long-standing members, whose terms have been renewed several times, benefits the entire group by providing a consistency of objectives and an enhanced knowledge of the Committee's history. Members who have been unable to meet the expectations for attendance and project participation may be asked to either step down or recommend others 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 2005, the Committee's membership will include individuals from commercial and investment banks, a voice broker, the EBS Group Limited, and Continuous Linked Settlement (CLS) Bank.

Finally, the subcommittee designates appropriate members to function as liaisons to facilitate communication between the Committee and its existing working groups. The liaisons for 2004 and 2005 for the two existing working groups are identified below.

ASSIGNMENTS, 2004 AND 2005

2004

Committee Chair

Mark Snyder

Liaisons for Working Groups

Chief Dealers
James Kemp
Susan Storey

Operations Managers
Richard Rua
Robert White

Membership Subcommittee

Dino Kos (Chair)
James Kemp
Mark Snyder
Jamie Thorsen

2005

Committee Chair

Mark Snyder

Liaisons for Working Groups

Chief Dealers
Nigel Babbage
Susan Storey

Operations Managers
Richard Rua
Ellen Schubert

Membership Subcommittee

Dino Kos (Chair)
Jack Jeffery
Douglas Rhoten
Mark Snyder
Jamie Thorsen

Communication Subcommittee

Simon Eedle
Jamie Thorsen

Meetings, 2004 and 2005

The Foreign Exchange Committee meets approximately eight times a year. Of the eight meetings held, two are usually luncheons, and the remaining six consist of a two-hour late afternoon sessions followed by a reception and dinner. The Chair, working with the executive assistant and other representatives from the Federal Reserve Bank of New York, is responsible for the agenda. In preparing for the meetings, the Chair solicits advice from the other 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 will often ask members specific questions and request their feedback, comment, or advice. In 2004, for example, members began a number of meetings with detailed comments on the recent trading patterns of the U.S. dollar, euro, and yen. Other topics included the fixed-rate Asian currencies and official intervention in the foreign exchange market. The discussions during the markets development portion of the meeting not only provide important information and guidance for the Committee's sponsor—the Federal Reserve Bank of New York—but also plant seeds for future projects and initiatives. The market development section is followed by a review of specific industry developments, including legal matters.

In the second half of the meeting, the members turn to the specific projects or initiatives of the Committee and its associated working groups. The individual members who sponsor the Committee's projects lead the project discussion with the objective of obtaining approval of next or final steps. In 2004, for example, some of the projects included efforts to eliminate the use of authorization letters, to update the Committee's trading guidelines and best practice recommendations, and to introduce new trade-related documentation for Asian non-deliverable foreign exchange transactions. Decisions on project-related work are made during meetings.

The Committee underscores the importance of strong interaction with its associated global groups by routinely inviting guests from other foreign exchange committees and related industry groups. At the May 2004 meeting, the Committee invited members of the Operations Managers Working Group. On November 18, the Committee held its eighth annual joint meeting with the Singapore Foreign Exchange Market Committee.

2004

January 8

February 12

March 11

May 6

June 10

September 16

October 14

November 18
(in Singapore with the Singapore Foreign Exchange Market Committee)

2005

January 13

February 17

March 24

May 5

June 9

September 8

October 6

November 10
(in New York with the Singapore Foreign Exchange Market Committee)

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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. In addition, the president of the Financial Markets Association–USA is invited to participate.
- 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), the president of the Financial Markets Association–USA (ex officio), 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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