October 31, 2008

The Honorable Timothy F. Geithner
President
Federal Reserve Bank of New York
33 Liberty Street, 10F
New York, NY 10045

Dear Mr. Geithner:

The financial industry is facing turbulent times. In expansion of the goals that the Major Dealers and buy-side institutions in the Operations Management Group (OMG) have focused on in previous commitments,[1] this letter presents a series of strategic steps to further strengthen the operational infrastructure for OTC derivatives over both the short term as well as the long term. These include continuing to improve derivative market processing and scalability as well as augmenting risk mitigation and transparency. A broader vision that describes the steady-state goals and illustrates the relevance to recent market events and policy initiatives appears below.

Recent Market Events and Policy Commentary

The impact of recent market events has been far-reaching but particularly evident in the derivatives industry, giving rise to significant operational processing demands and challenging the infrastructure to manage increased trade activity and risk management. These events have brought into even sharper focus the systemic risk concerns the industry faces. While scalable OTC derivative processing and infrastructure are key elements to successful market growth and resiliency, they become even more critical during stressed markets.

The President's Working Group on Financial Markets (PWG) has devoted significant focus in recent months to commentary on infrastructure improvements and resiliency enhancements for OTC derivative markets. Additionally, industry policy groups such as the Counterparty Risk Management Policy Group III (CRMPG III) have also issued recommendations reinforcing some of the proposals set out by the PWG. In its March Policy Statement on Financial Market Developments, the PWG made several recommendations including the development of "a longer-term plan for an integrated operational infrastructure supporting OTC derivatives." [2] Together, these recommendations form the core of the longer term plan that the OMG has been working toward in the last year and presents here today.

Significant Progress In Mitigating Risks Associated with Derivatives

Over the past several years, the derivative marketplace has taken aggressive steps to improve the OTC processing environment, significantly reducing systemic risk and increasing transparency, including the following:

- Achievement of 92% aged confirmation backlog reductions in Credit Derivatives notwithstanding volume increases of over 300% since 2005, 74% confirmation backlog reductions in Equity Derivatives since 2006, and 53% confirmation backlog reductions in Interest Rate Derivatives since 2006.
- Increased rate of electronic confirmation automation in Credit Derivatives from 19% in 2006 to 95% in 2008.
- Increased rate of electronic confirmation processing from 46% to 91% in Credit Derivatives since 2006 and from 34% to 94% of eligible trades between major dealers in Equity Derivatives since February 2007.
- Increase of certainty around novation processing by eliminating assignments without consent on trade date in Interest Rate and Credit Derivatives.
- Since January 2008, the notional value of credit default swaps outstanding has decreased by $24.4 trillion through trade compression, which by any standard is a very sizable fraction of the total notional outstanding. Renewed and still more aggressive compression efforts are underway suggesting that further large reductions are in the pipeline.

---

[1] The OMG includes buy-side institutions and alternative investment firms such as AllianceBernstein, BlueMountain Capital Management LLC, Citadel Investment Group, L.L.C., Pacific Investment Management Company, LLC, GLG Partners LP and Goldman Sachs Asset Management.
[2] Policy Statement on Financial Market Developments, The President's Working Group on Financial Markets, March 2008 p 6.

- Increased use of LCH.Clearnet as a central counterparty to reduce counterparty credit risk among Dealers for Interest Rate Derivatives.
- Establishment of a DTCC trade warehouse in Credit Derivatives to increase transparency, automate payments and ease Credit Event processing.
- Establishment of a successful auction-based mechanism actively employed in 14 Credit Events including Fannie Mae, Freddie Mac and Lehman Brothers, allowing for cash settlement.
- Agreement among major dealers on a standard close-out methodology.
- In recent weeks, efforts to accelerate central counterparty clearing have achieved a measure of success. In furtherance of reducing counterparty credit risk, the market is actively pursuing the implementation of a central counterparty in Credit Derivatives, expected to be in place to clear index transactions commencing in November 2008, with single names commencing in January 2009.

These and other initiatives have resulted in broad-based improvements in the efficiency and transparency of the derivative marketplace while also bringing a fresh and meaningful risk mitigation practice into play across these markets. Indeed, a powerful argument can be made that absent these enhancements, the credit market crisis of the past 15 months could have been even more damaging than has been the case.

Strategic Vision Forward

While the positive inroads the industry has made are clear, there is still more work to be done. To this end, the OMG has established seven high level goals across the derivative market forming the core of the industry's strategic vision going forward. For some asset classes, many of these concepts have been the focus for the last several years and continue to evolve. For others, some of the concepts are new and require more research and discussion before solutions can have impact. For all asset classes, however, there is a recognition that the end state across derivatives needs to include some form of these components to make OTC derivative processing more scalable, transparent and resilient. The seven goals are as follows:

- Global use of central counterparty processing and clearing to significantly reduce counterparty credit risk and outstanding net notional positions.
- Continued elimination of economically redundant trades through trade compression.
- Electronic processing of eligible trades to enhance T+0 confirmation issuance and execution.
- Elimination of material confirmation backlogs.
- Risk mitigation for paper trades.
- Streamlined trade life cycle management to process events (e.g. Credit Events, Succession Events) between upstream trading and confirmation platforms and downstream settlement and clearing systems.
- Central settlement for eligible transactions to reduce manual payment processing and reconciliation.

Though many unique challenges face the Credit, Equity, Interest Rate, Commodities and Foreign Exchange/ Currency derivative asset classes because of appreciable differences in market maturity, volumes, support models, users and best practices, there are shared concerns and objectives. Detailed in Annex A to this letter, each asset class articulates a strategic roadmap presenting the high level approach, obstacles and milestones as they relate to the above goals, where applicable. Also detailed in Annex A, collateral practitioners share their strategic vision across asset classes toward improving collateral and valuation processing,

The OMG, together with the International Swaps and Derivatives Association, Inc. (ISDA), Managed Funds Association (MFA), and the Asset Management Group of the Securities Industry and Financial Markets Association (SIFMA) will actively work with industry participants to educate the marketplace on the roadmaps presented within and look forward to reporting on our progress.

Yours Sincerely from the Senior Managements of:

Bank of America, N.A.
Barclays Capital
BNP Paribas

HSBC Group
JP Morgan Chase
Merrill Lynch & Co.

Citigroup	Morgan Stanley
Credit Suisse	The Royal Bank of Scotland Group
Deutsche Bank AG	Société Générale
Dresdner Kleinwort	UBS AG
Goldman, Sachs & Co.	Wachovia Bank, N.A.

International Swaps and Derivatives Association, Inc. (ISDA)
Managed Funds Association (MFA)
Asset Management Group of the Securities Industry and Financial Markets Association (SIFMA)

Annex A

Asset Class Roadmaps and Deliverables [1]

Credit Derivatives Market

Since 2005, the Credit Derivatives market has made significant progress in addressing critical stress points in its infrastructure including the novation protocol, outstanding confirmation backlog reduction, establishment of the DTCC Trade Information Warehouse (TIW) and central cashflow settlement. Recent events have demonstrated, however, that there is still considerable room for improvement. Fundamentally, we need to strengthen the infrastructure to make it more resilient and scalable, better able to mitigate risk and more transparent than it has been to date. The strategic vision is to have a Credit Derivatives infrastructure that achieves these market attributes on a level comparable to more mature markets. In order to get to that level, we have produced a comprehensive strategy based on the seven high level goals outlined in this letter. The strategy involves several parallel efforts, each with significant milestones and measures to track progress.

The most critical of these efforts is the successful launch of a central counterparty and clearinghouse, which will centralize market information and reduce systemic risk. Additionally, in an effort to reduce the outstanding gross notional of existing contracts and the operational burden of servicing large portfolios of trades, we will continue to pursue portfolio compression. Other critical efforts include our drive to confirm all trade events as close as possible to the point of trade execution. To achieve this goal, we will focus on specific populations of trades which have stressed the infrastructure in the past such as novations, mass allocations and successor events. We will also increase the infrastructures' capability to automatically process life cycle events, both through improvements to TIW and in improving business process for life cycle events, such as novations.

- Central Counterparty Clearing: As committed in the Jul 31, 2008 letter, the Major Dealers in the OMG remain committed to central clearing in the index, single name and index tranche products. Each Major Dealer in the OMG commits to (i) support a clearing platform and (ii) utilize such platform to clear all eligible products where practicable. Pending regulatory approval, index clearing will begin by Nov 30, 2008 with single names to follow within the first quarter of 2009.
- Portfolio Compression: The Major Dealers in the OMG commit to continue aggressive compression of inter-dealer portfolios along the following schedules:
  - Single Name Trades: The Major Dealers in the OMG have begun cycles of 15 to 20 Reference Entities per week in each of the US and Europe.
  - Index Trades: The Major Dealers in the OMG have begun monthly cycles.
  - Results: The results of these processes will be shared with supervisors. In addition, any changes to the above processes, which may be appropriate over time, will be discussed with supervisors.
- Electronic Processing: The Major Dealers in the OMG commit that all electronically eligible confirmable events[2] including new trades, novations and terminations will be legally confirmed on an electronic platform on trade date, as close as possible to the point of execution in order to minimize operational risk. The OMG will use multiple strategies to accomplish the above objective which will include: (i) detailed metrics by market composition and market complexity (inter-dealer trading, dealer to buy-side institution trading, derivatives prime brokerage transactions, trades with counterparties that allocate into multiple sub-funds, and novations), (ii) increased focus on submission accuracy (confirmation without modification), (iii) real time issue resolution tools on DTCC, (iv) continued CDS product standardization and (v) simplification of the DTCC confirmation process. All targets below will be revisited quarterly with supervisors to assess the success of participants and to make incremental yet significant changes to the targets.
  - Submission Timeliness: By Jun 30, 2009: the OMG commits to a T+0 submission target of 85% across all trades, including novations. Until replaced by this T+0 submission target, the T+1 submission target of 92% from the July 2008 letter will remain in place.

[1] To further educate market participants in regard to the various commitments, market initiatives and solutions, the International Swaps and Derivatives Association, Inc. (ISDA) has scheduled a number of conferences in New York, London, Sydney, Hong Kong and Tokyo.

[2] Electronically eligible confirmable events are defined as being covered by a Master Confirmation Agreement (MCA) or Standard Terms and being supported on one or more electronic confirmation platforms.

- Submission Accuracy: By Jun 30, 2009: The OMG will expand its current commitment for submission accuracy to 94% of all trade types, including novations confirmed without modification. Until replaced by this 94% accuracy target, the accuracy target of 92% from the July 2008 letter will remain in place.
- Confirmation Timeliness: The OMG remains committed to the 95% T+5 confirmation target set in the July 2008 letter, and will continue to report performance against this target. In addition, the OMG will track T+0 confirmation and performance will be published on a monthly basis to supervisors.
- RED: The commitments set forth in the March 2008 letter regarding RED code usage remain in force. The OMG continues to promote, as industry best practice, the use of standard reference data for confirmable fields in CDS confirmations.

- Life Cycle Event Processing: The Major Dealers in the OMG commit to the electronic and automated processing of trade life cycle events with efficient and straight-through-processing between upstream e-trading platforms and downstream post trade execution platforms, where possible.
  - Warehousing: The OMG supports the TIW as a single, centralized source of industry portfolio statistics to enhance the transparency of the market for participants and supervisors. The Major Dealers in the OMG commit to universal use of the TIW for all eligible products to ensure life cycle processing scale and resilience. While eligible new trades automatically get stored in TIW, backloading is necessary for outstanding eligible trades. The backloading of legacy portfolios will take place according to the following milestones:
    - Feb 28, 2009: The Major Dealers in the OMG to complete backloading.
    - May 31, 2009: The buy-side institutions in the OMG and top ten non-OMG Dealers[3] to complete backloading.
    - Aug 31, 2009: Top ten non-OMG buy-side institutions[4] to be backloaded.
    - Nov 30, 2009: Remaining counterparties' portfolios to be backloaded.
  - Automated Processing of Life Cycle Events: The OMG commits to process major life cycle events in the TIW for all electronically eligible confirmable trades including:
    - Clearing automatically processed through the TIW, where applicable.
    - Compression and tear ups automatically processed through the TIW.
    - Credit Events automatically processed through the TIW.
    - Successor events automatically processed through the TIW.
    - Maturities, expiries and exercises automatically processed through the TIW.
    - Bulk events such as mass terminations and novations automatically processed through the TIW.

    As functionality to enable each of the above is developed within the TIW, DTCC operating procedures will be updated to prescribe adoption timelines and requirements.
  - Novation Consent: The OMG continues to view novations as a stress point in the market. As in the March and July letters, we are committed to 100% processing of novation consents for eligible products through electronic platforms by Dec 31, 2008 (eligible products include corporate, sovereign, mortgage, and loan CDS, index, and tranches, as well as muni CDS and muni index). After this date, the names of the buy-side institutions who continue to submit e-mail requests for novations of eligible products will be provided to each dealer's primary regulators. After Feb 28, 2009, the Major Dealers will only accept novation consents on eligible products that are submitted on electronic platforms and will not accept e-mail. The Major Dealers will continue to support currently available electronic platforms and will work together with major market participants to develop a scalable and controlled process, including potential revisions to the ISDA Novation Protocol.
  - Auction Hardwiring: It remains ISDA's goal, as noted in the Jul 2008 letter, to achieve the following by Dec 31, 2008: (i) publish an Auction Supplement to the Credit Derivative Definitions that applies the existing settlement auction methodology to the Credit Events and Reference Entities for most types of trades and (ii) administer a protocol to bring existing trades of these types onto the new standard. As previously noted, categories not covered at this stage are being addressed separately; progress and timelines for these exceptions will be detailed once the Auction Supplement has been published. In preparing the Auction Supplement, ISDA will leverage the experience of recent Credit Events.

[3] As determined by DTCC Board feedback in consideration of the largest trade populations in the TIW
[4] As determined by DTCC Board feedback in consideration of the largest trade populations in the TIW

- Elimination of Material Confirmation Backlogs: As stated in the July letter, the Major Dealers commit to a target whereby unconfirmed confirmations aged more than 30 calendar days are not to exceed more than 1 business day's worth of trading volume.
- Risk Mitigation through Affirmation: The Credit Derivatives industry continues its goal to positively affirm the economic details of unconfirmed paper trades by T+3 and unconfirmed electronically eligible trades by T+5 which continue to be reported monthly to supervisors.
- Central Cash Flow Settlement: The OMG continues its commitment to significantly increase (i) the settlement efficiency for Credit Derivatives by increasing the scope of products eligible for central settlement across the TIW and CLS Bank infrastructure and (ii) the volume of market participation on the platform.
    - Eligible Products: By Nov 30, 2008: The OMG commits to developing a plan to implement the settlement of CDS on ABS transactions in 2009. Following the successful implementation of index tranche settlements in Oct 2008, CDS on ABS remains the primary product that is electronically confirmed but not settled through the TIW.
    - Market Participation: The OMG commits to a volume-based, tiered timeline to achieve 96% processing of settlement volume on electronically matched transactions across all market participants. As this will require market participants, custodians, prime brokers and operational outsourcing providers to implement technology and operational change to adopt the shift in business process, the OMG commits to achieving this target by Nov 30, 2009 as follows:
        - By Feb 28, 2009: All Major Dealers in the OMG fully live for central settlement.
        - By May 31, 2009: All buy-side institutions in the OMG fully live for central settlement, some of whom will be dependant on their custodians or operational service providers.
        - By Aug 31, 2009: 90% of settlement volume on electronically matched transactions across market participants settled via TIW and CLS.
        - By Nov 30, 2009: 96% of settlement volume on electronically matched transactions across market participants settled via TIW and CLS.

Equity Derivatives Market

Over the last two years, the OMG has worked to move the Equity Derivatives post-trade landscape from one which was predominantly paper-based, to a more electronic trade processing environment with all Major Dealers now live on both DTCC and MarkitWire for trade matching. 94% of electronically eligible transactions between the Major Dealers and 80% with top 20 buy-side counterparties[5] are now confirmed electronically. During this time, confirmation backlogs have also been reduced by an average of 74%. Steps have been taken toward standardizing documentation, with a number of new Master Confirmation Agreements having been published by ISDA.

Whilst recognizing this progress, the OMG acknowledges that we have further to go to strengthen our operational infrastructure and are therefore committed to delivering the strategic steps set out in the roadmap below, with particular focus on scalability and risk mitigation. The challenges we face in this asset class are the breadth of products covered, the current lack of standardization, and the diverse client base, many of whom trade only small volumes.

The major focus for Equity Derivatives remains the electronic processing of confirmations, with currently only 40% of Equity Derivative transactions being eligible for electronic matching. The OMG will materially increase this percentage over time, with an initial target of 60% of total volume being electronically eligible by the end of 2009. Significant emphasis is being placed on the challenges around the Equity Swap product as this covers a reasonable proportion of the business volume. This also takes into account the relatively higher proportion of structured products that are unlikely to become electronically eligible due to their complexity, and which are being prioritized for alternative risk mitigation procedures. It is important to note that good progress has been made to date in the electronic matching of options and variance swaps, and the highest priority for the OMG in 2009 is to extend this capability to equity financing swaps (Equity Swaps).

The OMG is also committed to working toward a longer term goal of T+0 matching for electronically eligible confirmable events. To achieve this, we have set interim goals around timeliness and accuracy of matching, as well as overall matching rates for eligible products with all buy-side counterparties. This takes us closer to the higher level objective of risk mitigation on trade date.

The priority given to the electronic processing of the Equity Derivatives product in the first half of 2009 means that milestones around other aspects of the roadmap have been set in the second half to ensure that the OMG is able to successfully deliver on all of its commitments. This includes our intention to improve life cycle event and settlement processing.

- Electronic Processing:
  - Electronic processing remains the highest priority for the Equity Derivatives market, with currently only an average of 40% of confirmable events reported by the Major Dealers being electronically eligible. The primary focus of the OMG in 2009 will therefore be on increasing the overall percentage of electronically eligible products, with a target of increasing to 60% of Major Dealers' volume by the end of 2009. This number is reflective of the relatively higher proportion of structured products, currently estimated at 25% of total volume, which will not be candidates for electronic processing. The largest single product category in our non-electronically eligible volume which can be brought onto electronic platforms is Equity Swaps, which will be a major focus for the OMG in 2009. To achieve this increase, the OMG commits to:
    - By Oct 31, 2008: Collect and publish quarterly volume metrics by product for non-electronically eligible transactions to identify the next candidates for electronic processing.
    - By Jun 30, 2009: Work with ISDA to publish MCAs for three additional products: (i) emerging market options (EMEA and AEJ), (ii) basket options (index and share) and (iii) one additional product to be determined which will be prioritized by Nov 30, 2008.
    - Post Jun 30, 2009: Work with ISDA to publish an MCA where a product is identified from the above metrics to make up an average of 2% or greater of Major Dealers' non-electronically eligible volume over a 6 month period. The OMG additionally commits to work with the service providers to ensure these products are supported on an electronic confirmation platform.

[5] As defined in Oct 2007, the top 20 buy-side counterparties were determined by highest average per-dealer trade volume over a static eight month period.

    - Work with ISDA to simplify the current legal framework for Equity Derivatives, which relies largely on bilateral MCA negotiation, with a different MCA being negotiated for each region in which the product is traded. ISDA commits to working with the OMG to simplify this framework where possible, including exploration of movement to multi-region MCAs. By Feb 1, 2009, ISDA commits to publish the results of this work.
  - The OMG commits to a medium term goal of increasing the electronic matching target for electronically eligible events to 85% by Sep 30, 2009. This takes into account the large number of buy-side participants with lower trading volumes which make up a material portion of the Major Dealers' volumes. Over the longer term, the OMG would aim to increase the percentage of electronic matching for eligible trades by continuing to onboard the smaller volume buy-side participants and making electronic confirmation the default option for the industry. To work toward this target the OMG has defined the following milestones:
    - By Jan 31, 2009: The OMG commits to electronic matching of 75% of electronically eligible events with all counterparties. This target will increase to 80% by Mar 31, 2009 and 85% by Sep 30, 2009.
    - By Mar 31, 2009: All Major Dealers in the OMG commit to supporting electronically eligible products on an electronic platform within 90 days of the product becoming electronically eligible.[6] Dealers will begin including each new product that becomes electronically eligible in their electronically eligible volume once the 90 day period has elapsed. This target excludes Equity Swaps which will be subject to separate targets and reporting.
    - To enable us to meet the above targets, the OMG will promote a best practice of on-boarding buy-side participants to an electronic platform within 90 days when they are trading an average of four confirmable events in eligible products per month over a three month period. Starting on Mar 31, 2009, the OMG will provide a list of dealers and buy-side participants who are trading more than four eligible trades per month, but have not on-boarded to an electronic confirmation platform, to supervisors and will provide regular updates. Once again, this target excludes Equity Swaps which will be subject to separate targets and reporting.
    - By Nov 30, 2008: The Major Dealers in the OMG commit to publish metrics regarding their submission and matching performance on electronic matching platforms, including trades which require modification before they match.
    - By Mar 31, 2009: The OMG commits to 95% targets for submitting electronically eligible confirmable events by T+1 to an electronic confirmation platform, and by T+5 for matching.
    - Root cause analysis will be performed on trades which fail to meet the above targets, or which require amendment before matching. The results of this analysis will be shared in the Equity Implementation Group, and where common issues are identified, relevant process or technology enhancements will be prioritized with market participants and service providers.
    - Further targets will be set by Mar 31, 2009 to track progress toward our end goal of matching electronically eligible volume on T+0.
- <u>Non-Electronically Confirmable Transactions</u>: Given the higher number of bespoke transactions in the Equity Derivatives market, and based on current volumes, the risk mitigation of non-electronically confirmed transactions remains a priority for the OMG, with a current best practice guideline of T+5 being observed.
  - The OMG further commits to a goal of reducing the timeframe for risk mitigation of most non-electronically eligible transactions between firms in the OMG to T+3 by Jun 30, 2009 and will review the feasibility of using electronic affirmation platforms to achieve this goal. Further, the Major Dealers in the OMG will begin reporting on the progress toward this risk mitigation goal starting on Mar 31, 2009. Best practice for risk mitigation of transactions with market participants outside the OMG will remain as T+5 but will be further reviewed in 2009.
  - <u>Equity Swaps</u>: It is estimated that Equity Swaps make up the highest proportion of the market's non-electronically eligible volume and the OMG therefore remains committed to the publication of a strategy regarding the processing of this product by Nov 30, 2008. Steps being taken to develop this strategy are:

[6] "Electronically-eligible" is defined as having a published MCA and being supported on one or more electronic confirmation platforms. Where transactions are negotiated through or under master agreements published by regulatory or professional organizations (e.g. German Master Agreements), these will not be included in the eligibility criteria unless specifically agreed.

- Setting up a working group with representation from traders and legal departments of firms in the OMG to agree the roadmap taking into account the Equity Swap templates recently published by ISDA for Europe and Asia Ex Japan.
- Working with ISDA to further standardize documentation for Equity Swaps between dealers taking into account existing inter-dealer MCAs.
- Working with DTCC and MarkitWire to ensure they are able to support electronic matching for terms agreed in bilateral MCAs.
- Agreeing to 2009 targets for the electronic matching of Equity Swaps. These targets will be distinct from the targets mentioned in previous sections which apply to the other types of Equity Derivatives.
- Defining the sub-product types which exist within the Equity Swap product, to ensure consistent metrics reporting amongst the Major Dealers.

- <u>Elimination of Material Confirmation Backlogs:</u>
  - The Major Dealers in the OMG commit to a medium term goal of having unconfirmed electronic and paper confirmations greater than 30 calendar days not exceed 2 business days' worth of trading volume by Jun 30, 2009, based on the prior three month rolling volume to be reviewed semi-annually. It is our longer term intention to reduce this target further and we will therefore review this commitment based on progress in 2009.
- <u>Life Cycle Event Processing</u>: Equity Derivatives are subject to various types of life cycle events which distinguish them from other OTC Derivative products, including corporate action events, barrier events, and equity resets. The priority being given to electronic matching means that focus on improving processing of these events is lower than on the items described earlier. That being said, the OMG nonetheless commits in the longer term to investigate ways of improving the processing of some or all of these life cycle events. Working groups will be set up consisting of representation from both buy-side participants and dealers, to define the priority events to be addressed, and to understand which platforms could provide solutions in this space. We will deliver to the following timeframes, which take account of the OMG's focus in the first half of the year on increased electronic matching:
  - <u>Warehousing</u>: By Jun 30, 2009 the OMG commits to present a plan for the implementation of a warehouse to centrally store records of OTC Equity Derivative transactions.
  - By Sept 30, 2009: A target architecture for life cycle event processing will be defined, and consideration will be given to the benefits of central storage for Equity Derivatives to facilitate this architecture.
  - By Dec 31, 2009: Discussions will be held with potential service providers and if the OMG consider there to be sufficient benefits in any of these solutions, a decision will be made to proceed with implementation in 2010.
- <u>Central Clearing and Settlement:</u> As with life cycle event processing, the roadmap toward central clearing and settlement for Equity Derivatives will be defined once material progress in the electronic processing of these products has been made, without which such solutions would have limited benefits. An interim goal for the Equity Derivatives market is to agree an approach for electronic pre-value date affirmation of cash-flows, to reduce the likelihood of settlement fails. Such a solution can be independent of full electronic confirmation matching, and can therefore be addressed in parallel to the electronic processing initiatives described above. Milestones toward this goal include:
  - By Sept 30, 2009: A target architecture for cash-flow affirmation will be defined, which will include a proposed timeframe and roadmap for electronic pre-value date affirmation of settlements.
  - By Dec 31, 2009: Potential service provider solutions will be evaluated by the OMG and a recommendation made as to whether to proceed with one or more of these solutions.

Interest Rate Derivatives Market

Interest Rates Derivatives is a very well established highly mature market comprised of participants that vary greatly based on their level of involvement. While there are participants that trade high volumes, there are also a significant number of participants that trade relatively low volumes. The largest OTC derivative market measured by outstanding notional, Interest Rate Derivatives have experienced steady growth over a number of years. This growth has been supported extensively by the ISDA documentation framework and more recently by the emergence of electronic confirmation platforms as well as a central counterparty and settlement platform.

The key strategic goal for the Interest Rate Derivatives market is to increase scalability and mitigate risk through electronic processing of trade confirmations on trade date, as soon as possible after execution in a single step process. While a relatively high proportion of trade activity in the market is electronically eligible (87% as of Sep 2008), only 54% of it is presently being electronically confirmed. As such, increasing the rate of electronic processing for already eligible products remains the highest priority for Interest Rate Derivatives. Specifically, we need to increase the take-up by existing participants and increase adoption by new participants. Off the back of this, it's also our goal to further increase the number of electronically eligible products.

Life cycle event processing is less of a critical issue in the Interest Rate Derivatives market compared to other derivative products. This is due to a limited number of event types which already have well established processes. Our strategic roadmap recognizes the need to further improve novation processing, however it is viewed as a relatively lower priority compared to increase of electronic confirmation processing.

Additional initiatives to mitigate risk and improve efficiency in the Interest Rate Derivatives Market are included in the strategic roadmap below. These focus on risk mitigation for paper confirmations, portfolio compression to reduce overall outstanding transactions and commitments to improve the current settlement process.

Specific details of these high level goals are included below.

- <u>Electronic Processing:</u> Electronic processing remains the highest priority for the Interest Rate Derivatives market. The OMG have already committed to electronic confirmation targets such that by Oct 31, 2008, 65% of electronically eligible confirmable events with all counterparties will be processed on electronic platforms, increasing to 75% by Jan 31, 2009. Key challenges faced in this market include: (i) timely and accurate receipt of all trade allocation details,[7],(ii) maximized use of existing platforms by current participants and the avoidance of submitting single-sided trades from broker to dealer requiring a paper confirm rather than double-sided trades between dealers to MarkitWire and (iii) adoption of electronic confirmation platforms by market participants. The Major Dealers in the OMG commit that all confirmable events including new trades, novations and terminations should be legally confirmed in a single step electronic process on trade date, as close as possible to the point of execution in order to minimize operational risk. All participants to the OMG commit to supporting the use and development of interoperable infrastructure to standardize the electronic confirmation of trades.
    - The OMG commits to facilitating electronic communication of all trade allocations on trade date as follows:
        - Jan 31, 2009: Identification of solutions and agreement on an efficient interoperable industry model in consultation with service providers.
        - Jul 31, 2009: All participants in the OMG to commit to launch of an interoperable model for communicating trade allocations.
        - Nov 30, 2009: All trade allocations to be received electronically using an industry accepted tool.
    - A sub working group of the Rates Implementation Group has identified a number of opportunities to increase the volume of trades processed electronically through MarkitWire by existing participants. The following initiatives will ensure we maximize the volume of trades processed electronically:

[7] Trade allocation details are currently received via various methods including email and spreadsheet transfer and not all allocations are received on trade date thus preventing the ability to confirm trades on trade date. In order to maximize the efficiency provided by electronic confirmation platforms, it is important to establish an interoperable model that will support the efficient communication of trade allocation details

- Oct 31, 2008: All Major Dealers in the OMG to accept double-sided MarkitWire trades and identify opportunities where a trade could have been electronically confirmed but was not. Using this analysis, Major Dealers shall ensure future trades are confirmed electronically.
- Dec 31, 2008: All Major Dealers in the OMG commit that their integration to MarkitWire does not inhibit double-sided trades and therefore electronic confirmation. This should be achieved through either (i) implementation of the Early Risk function in MarkitWire[8] or (ii) proprietary technology development.
- Mar 31, 2009: All Brokers to be able to process every MarkitWire trade double-sided. Currently some Brokers who facilitate cross border trading involving their own offices in more than one region have to enter two single sided trades into MarkitWire due to their internal infrastructure design. In this scenario, whilst the trade communication to each participant is carried out electronically via MarkitWire, the lack of a double-sided electronic confirmation means that paper confirmations are still required. Removal of these issues will further contribute to the further maximization of MarkitWire use.

o In addition, a number of initiatives have been identified to increase use of electronic confirmation platforms by all market participants.
  - Jun 30, 2009: All Major Dealers in the OMG commit to support eligible (existing and new) products within 90 days of the above date, or within 90 days of the new product being available on the electronic platform, where they are trading more than 20 eligible trades per month based on a three month average. Starting on Jun 30, 2009, the OMG will provide a list of Major Dealers who have not begun to electronically confirm new or existing products on electronic platforms that meet criteria outlined in this section to supervisors and will provide regular updates.
  - Jun 30, 2009: All participants in the OMG commit that all confirmable events (new trades, novations and terminations) that can be processed electronically using an electronic confirmation platform should be processed electronically within 90 days where they are trading the minimum volume threshold of 20 eligible trades per month based on a three month average. This commitment will be publicized to all market participants in cooperation with ISDA, SIFMA and MFA. Starting on Jun 30, 2009, the OMG will provide a list of buy-side participants who are trading more than 20 eligible trades per month, but have not onboarded to an electronic confirmation platform to supervisors and will provide regular updates.

- Trade Compression: The OMG is committed to continuing the strategy of periodic trade compression in order to reduce portfolio size and operational risk by maximizing use of existing market solutions by subscribed users for all eligible products. Detailed information illustrating current market usage will be supplied to supervisors by the relevant service providers on an ongoing basis forthwith.
  - o Feb 28, 2009: The OMG commits to identification and assessment of solutions in consultation with service providers to further maximize the operational benefits of trade compression.
  - o Mar 31, 2009: Commencement of coordinated compression cycles amongst all Major Dealers in the OMG with the goal of maximizing trade compression by eligible participants on an ongoing basis.
- Elimination of Material Confirmation Backlogs: As stated in the July letter, the Major Dealers in the OMG commit to a target whereby unconfirmed confirmations aged more than 30 calendar days are not to exceed more than 2 business days' worth of trading volume.
- Non-Electronically Confirmable Transactions: There will always be a proportion of trades (currently 13% of Interest Rate Derivatives trade volume) which are not electronically eligible. For these trades, the OMG commits to a continued focus on risk mitigation initiatives such as verbal affirmation of trades as well as an agreed approach for identifying opportunities to migrate these non-electronically eligible products onto electronic confirmation platforms. The OMG have already committed to positively affirm all unconfirmed trades no later than T+5 business days and since Sep 30, 2008 have been reporting to supervisors the percentage of trades where significant financial trade details have been affirmed within T+5. In addition, there will always be a minority of market participants for whom it is not possible to prove the business case for onboarding onto an electronic confirmation platform. In order to ensure secure delivery of documentation and

[8] "Early Risk" is a feature available in the MarkitWire product suite that gives users the ability to capture a version of a trade in their proprietary systems prior to full bilateral agreement on the platform. This is useful in situations where one party to the trade is temporarily unavailable to fully agree the MarkitWire message. It enables the other user to update his trade capture system immediately and then agree the trade bilaterally as soon as both parties are available.

improved execution times for these market participants, the OMG commits to improve existing processes and introduce electronic communication wherever possible.

- Dec 31, 2008: Regardless of sophistication or current level of automation, all market participants who currently receive paper confirmations to review electronic solutions available, to be followed by implementation of such solutions as appropriate to ensure reduced time to execution.
- Dec 31, 2008: All participants in the OMG commit to a review of the previously published ISDA Best Practice Guidelines on affirmation and confirmation dispatch and recommend updates to ensure the Guidelines represent current commitments of the OMG.
- Feb 28, 2009: Definition of a process to highlight opportunities for onboarding new products onto electronic platforms where there has been sufficient volume and standardization will be agreed and shared with supervisors.
- Mar 31, 2009: All participants in the OMG commit to adhere to the updated Best Practice Guidelines

- Life Cycle Event Processing: As articulated above, because of the priority being given to electronic processing, the focus on improving processing of life cycle events is lower on the list. Nonetheless, the OMG commits to investigating ways of improving the processing of some or all of these life cycle events. We will deliver to the following timeframes, which take account of the OMG's focus on increasing electronic processing as discussed above.
  - Jan 31, 2009: Identification of solutions and agreement on an efficient interoperable industry process in consultation with service providers to develop an appropriate novation consent strategy for Rates that will support management of novation requests on trade date. The agreed process will be communicated to supervisors.
  - Jul 31, 2009: All participants in the OMG to commit to the launch of an interoperable process for communicating novations on trade date.
  - Nov 30, 2009: All novation consents to be received electronically using an industry accepted tool.
  - Warehousing: By Mar 31, 2009 the OMG commits to present a plan for the implementation of a warehouse to centrally store records of OTC Interest Rate Derivative transactions.
- Central Counterparty Clearing: The OMG commits to the continued use of central counterparty clearing by subscribed users of LCH.Clearnet's SwapClear service, which currently clears 14 currencies with maturity up to 30 years. OTCDerivNet[9] is currently working with LCH.Clearnet to (i) expand SwapClear to include additional products, (ii) extend EUR, GBP and USD to 50 years tenor, and (iii) add short front stubs (less 1 month) and single coupon swaps. Work is in progress to increase dealer participation in SwapClear. A number of new joiners will be announced over the next few months. The SwapClear membership criteria for new joiners will be as defined by the LCH.Clearnet membership criteria which are stated on the LCH.Clearnet website. The time to market and relative priority of the initiatives above will be reviewed with LCH.Clearnet at the OTCDerivNet Board and a detailed, agreed upon 2009 delivery schedule will be presented to the OMG by Nov 30, 2008.
- Central Settlement: The Interest Rate Derivatives marketplace has developed over time and has seen steady growth across product sets over the last few years. This has led to multiple product offerings and a diversified customer profile across the market. Asynchronous settlements and fewer novations lead to more scheduled and stable settlements in Interest Rate Derivatives. The roadmap toward central settlement will be influenced by the electronic processing goals and will need to incorporate the differences in Interest Rate Derivatives compared to other products in that there are limited life cycle events (no credit events or market disruption events).

  o By Mar 31, 2009: The OMG commits to assessing opportunities for (i) electronic pre-value date affirmation of settlements and (ii) multilateral net settlement across a range of service providers.

[9] OTCDerivNet is a company owned by a group of the world's leading banks in the OTC fixed income derivatives market. OTCDerivNet mission is to support a secure, efficient and cost-effective post-trade dated environment for the mutual benefit of the (OTC) derivatives industry in a way which serves to mitigate operational, credit and settlement risks, whilst reducing support costs and regulatory capital requirements.

Commodities Market

The Major Dealers involved in the trading of financially and/or physically settled commodities ("Commodities Major Dealers") are committed to accelerating our current initiatives and, where appropriate, aligning our agenda with the broader derivatives roadmap. The Commodities Major Dealers support listed, cleared OTC, OTC financial and, in many cases, physical commodities transactions across a diverse client/counterparty base. Market participants include the dealer community, investors, sovereign entities, industrial consumers and producers, and other segments. Our market also includes mature cleared OTC offerings from several major exchanges and a diverse and evolving vendor landscape. The metrics that we have been reporting to the supervisors and OMG demonstrate how the dealer community has supported significant growth while maintaining control on total aged outstanding confirms, combined with the self-initiated agenda to match electronically confirmations across a diverse asset class.

Looking ahead, present challenges/conditions include increased volumes of cleared OTC transactions due to the current credit/counterparty risk environment, broader market support for master documentation solutions, related extensions to electronic processing services, and increased focus on the Commodities Market by established and emerging electronic processing vendors.

Given the diverse landscape and market environment coupled with a significant volume of work already in progress, the Commodities Major Dealers agreed to focus on five key opportunities for ongoing improvement in parallel. The priority areas relate to improving processing, scalability, risk mitigation and transparency, and are consistent with the key themes in the overall OMG roadmap. It is important to note that our action plan includes continued work on documentation deliverables that are key to our electronic processing objectives.

Our action plan reflects our immediate priorities and commitments as part of the high level goals of this letter including: (i) increasing market-wide adoption of standard master agreements and supporting annexes; (ii) increasing electronic matching rates for confirms; (iii) reducing risk for non-electronically confirmable transactions; (iv) meeting cross product commitments for timely collateral and margin reconciliation; and (v) outlining our roadmap for potential settlement matching services that do not yet exist in the commodities market.

The Commodities Major Dealers will continue to work as a team to progress actions related to all the strategic roadmap categories and in partnership with ISDA and LEAP, on issues of importance to the wider market.

- <u>Electronic Processing</u>:
  - <u>Metrics:</u>
    - By Oct 31, 2008: Augment existing monthly metrics submission with product-specific breakouts (Energy, Metals, Other) to identify volumes and electronic matching rates/eligibility. Metrics provided will continue to include the same level of detail as prior submissions but with additional granularity on product-specific trends and opportunities.
    - By Dec 31, 2008: Meet with supervisors to review consolidated output and agree on potential refinements for metrics to be published in the first quarter of 2009.
    - Over the past month, the volume of cleared OTC trades on platforms such as ICE and NYMEX Clearport has doubled for a number of the Commodities Major Dealers. As a result, the Commodities Major Dealers expect to see electronic processing distributed across several industry platforms. As such, augmenting our current OTC Financial and Physical metrics with cleared OTC volumes will result in a more complete view of the overall electronic processing environment and information to support the prioritization of technology investments for the Commodities Major Dealers and external service providers.
    - Dec 31, 2008: In order to more accurately report the total population of activity supported through electronic processing, the Commodities Major Dealers will add cleared OTC metrics (Energy/Metals/Other in line with OTC metrics provided) to the monthly metrics submission.
    - <u>Electronic Matching:</u> Metrics reporting for matching rates will highlight key areas that may require additional technology investment by vendors and/or the Commodities Major Dealers while also providing a clear measure of progress for review by supervisors. Metrics reporting also plays a key role in supporting prioritization decisions, ensuring that we tackle the remaining product groupings

with the largest number of trades across the industry, in sequence to achieve higher rates of electronic matching. The Commodities Major Dealers commit to support the use of electronic matching transaction terms (“Electronic Matching”) as a preferred method of confirming transactions that are entered into dealer-to-dealer. The Commodities Major Dealers additionally commit to support Electronic Matching between dealers and non-dealers. We will continue to work with the ISDA Commodities Working Group, LEAP and other relevant industry forums to communicate and facilitate this agenda. In furtherance of these objectives, we additionally commit:

- By Dec 31, 2008: To provide greater transparency on current dealer-to-dealer matching rates, we will implement enhanced monthly reporting to identify dealer-to-dealer volumes and eligible trades that were not confirmed through Electronic Matching.
- By Jan 31, 2009: Review aggregate dealer-to-non-dealer matching rates for eligible products. Publish current industry benchmarks to the Commodities Implementation Working Group. Leverage ISDA Commodities Operations Working Group and LEAP to accelerate review of current and planned service provider offerings focused on electronic matching with the ultimate goal of increasing take-up of electronic offerings by all market participants.
- By Mar 31, 2009: Complete a white paper defining industry standards for electronic confirmation matching of eligible products. Distribute to appropriate dealer and non-dealer commodities forums.
- By Mar 31, 2009: Review dealer-to-dealer matching rates with supervisors.
- By Jun 30, 2009: Review aggregate dealer to non-dealer metrics with supervisors.

o <u>Documentation</u>:

- By Oct 31, 2008: Work with ISDA and LEAP to create and publish version 1.0 of the Commodities Documentation Matrix (attached in Annex B). This matrix covers key documentation for physical and financial products, including publication dates for completed documents and targets (where available) for work-in-progress.
- As demonstrated in the attached Matrix, the Commodities Major Dealers have made significant progress over a number of years in establishing master agreements for our key OTC financial and physical products. This effort continues in partnership with ISDA (ISDA Energy, Commodities and Developing Products Committee) and LEAP, with upcoming deliverables focused on new master agreement structures which will reduce our dependency on long-form confirmations and/or bespoke masters that are not scalable across the industry. These priority documentation projects relate to accelerating master agreement and companion annex capabilities for key physical product areas. In combination with electronic matching service provider offerings, these projects will also support our electronic processing strategy.

As stated in the Jul 31, 2008 letter, the Commodities Major Dealers remain committed to advance the following projects through LEAP [10] and ISDA (where applicable for each Commodities Major Dealer):

- By Jan 31, 2009: In partnership with ISDA, summarize dealer-to-dealer documentation “baseline” metrics to track document take-up rates for the Commodities Major Dealers. Review results with OMG and, where appropriate, discuss potential targets.
- By Apr 30, 2009: Promote further market adoption of LEAP Crude and Refined Products Master and ISDA Oil Annex to increase adoption rates by market participants.
- By Apr 30, 2009: Amend LEAP Master Agreement and ISDA US Oil Annex to include Canadian refined products and crude oil pipeline business.
- By Apr 30, 2009: Support development and publication of ISDA Emissions Annexes
- By Apr 30, 2009: Promote further market adoption of other ISDA physical commodity product Annexes (*e.g.,* the ISDA Global Physical Coal Annex).
- By Apr 30, 2009: The Commodities Major Dealers will work with ISDA to update the Jan 2009 baseline and provide the supervisory community with “take-up” status on all applicable documents in the Commodities Documentation Matrix.
- Ongoing: The Commodities Major Dealers will continue to use the combination of our documentation matrix (attached in Annex A) and product-level metrics output to prioritize documentation and electronic matching opportunities.

[10] Leadership for Energy Automated Processing. More information available on www.energyleap.org

- Trade Compression:
  - The Commodities Major Dealers are committed to continuing the strategy of periodic trade compression in order to reduce operational risk.
  - Strategies include bilateral tear-ups (early settlements) of trades and targeted transition of bilateral OTC to cleared OTC trades through established platforms such as ICE and NYMEX/Clearport.
    - Ongoing: Continued use of existing trade compression solutions where appropriate.
    - Feb 28, 2009: Review of solutions/alternatives to support incremental operational and credit benefits.
    - Mar 31, 2009: If appropriate, commence coordinated compression program. Given higher benefits of electronic processing and matching, including documentation deliverables, this is a second order priority for the Commodities Major Dealers.
- Life Cycle Event Processing:
  - Physically and/or financially settled instruments traded by the Commodities Major Dealers include a range of potential post-trade life cycle events, including novations.
    - Jun 30, 2009: Through our metrics working group and in partnership with ISDA and LEAP, the Commodities Major Dealers commit to prepare a summary of key commodities life cycle events. Where appropriate, we will align life cycle event projects such as enhancements to novation processing and other post-trade life cycle events with our established metrics, documentation and related electronic processing programs. Given the higher benefits of electronic processing and electronic matching, including documentation deliverables, this, as with trade compression, is a second order priority for the Commodities Major Dealers.
- Non-Electronically Confirmable Transactions:
  - The Commodities Major Dealers commit to an ongoing focus on risk mitigation initiatives including documentation deliverables and service provider/internal IT actions which will support the migration of priority non-electronically confirmable products onto electronic confirmation platforms.
    - Mar 31, 2009: Complete the definition of criteria and updated shared priorities for onboarding new products onto electronic platforms.
- Central Clearing and Settlement:
  - As noted above, the commodities market already includes a number of established OTC clearing services (e.g., ICE, NYMEX/Clearport) that also include electronic trading interfaces and central clearinghouse capabilities. Nonetheless, the Commodities Major Dealers commit to:
    - Ongoing: Where appropriate, continue leveraging existing central clearing and settlements services and work with current service providers to prioritize and implement additional cleared OTC product offerings as appropriate.
    - By Jan 31, 2009: Work with ISDA to host a commodities-specific service provider session targeted at the electronic processing of confirms and settlements. This will serve as an informational session for a broad range of market participants.
    - By Jun 30, 2009: Produce a generic white paper outlining industry requirements for commodities settlement matching which can be utilized by the various service providers to shape their solutions for the commodities market.
    - By Jun 30, 2009: Stay abreast of settlement offerings by service providers and leverage data for updated strategic roadmap as appropriate.
    - Ongoing: Leverage ISDA Commodities Working Group and LEAP to accelerate review of current and planned service provider offerings focused on settlements.

Foreign Exchange/Currency Derivatives Market[11]

Foreign Exchange (FX) is the largest financial market place in the world with over $3 trillion of daily turnover in its traditional core product[12] (Core FX). It is also a mature market where industry organizations that focus on operational issues have been in place since the early 1990s. These organizations meet regularly to discuss challenges and risks which have led to market-wide developments to address these risks. For the high-volume Core FX market, the industry has historically prioritized two of the seven high level goals of the strategic roadmap – electronic processing of confirmations and central settlement. Focusing on these aspects of transaction processing has proven to be an effective risk-control strategy for the FX market. Because of that success, and because the most common FX and currency derivative transactions (FX Derivatives) differ considerably from other derivative asset classes (e.g. they are short-dated, presently trade at low volumes, and are subject to fewer lifecycle events), the industry strategy is to leverage and expand the existing Core FX infrastructure to manage the risks of FX Derivatives, with a continued focus on the same two goals.

To control the risks associated with confirming transactions, the FX market employed SWIFT as its electronic messaging infrastructure. With the broad adoption of the SWIFT MT300 message-type in the early 1990s to confirm Core FX, SWIFT has since introduced additional message-types in its pursuit to increase electronic processing of FX Derivatives. To control the risks associated with settlement,[13] the CLS Group was formed in 1997 to create the first global (central) multi-currency settlement system. Today, CLS is the market standard for Core FX settlement and is widely recognized as a key factor in reducing the systemic risk associated with the growth in FX trading. The forward strategy for the FX industry is to adapt and expand the SWIFT and CLS infrastructure to support electronic processing and central settlement in the growing market for FX Derivatives. The derivative side of the market has experienced steady year-on-year growth over the past 15-20 years and presently makes up approximately 30% of total FX transactional volume. In addition, FX Derivative products comprise various distinct contract structures, resulting in corresponding variation in how the products are processed. For this reason, the industry has grouped FX Derivatives into five basic product families: non-deliverable forwards (NDFs), non-deliverable options (NDOs), deliverable options (Vanillas), simple exotic options (Barriers) and complex exotic options, where the first four families have been targeted for continued improvements in electronic processing.

To achieve this strategic vision, the Major Dealers in the OMG will partner with buy-side institutions and service providers to leverage and expand current infrastructure as well as benchmark, monitor, and share with supervisors industry progress. These efforts will be carried out in the series of milestones and commitments outlined below. With respect to other high-level goals for OTC markets (such as trade compression and central clearing) the industry recognizes them as important features of a resilient OTC market infrastructure, but for FX Derivatives these goals are considered secondary to the critical priorities of electronic processing and central settlement. That said, deliberations will continue as to their future prioritization A five-year steady-state goal would see full electronic processing[14] and central settlement for all FX derivative families except for complex exotic transactions, where increased market standardization would be utilized to minimize the risks of manual processing.[15]

The plan to move the market in the direction of our steady-state goal is as follows:

- <u>Central Settlement:</u>
  - The strategic objectives of CLS are to increase settlement volume through:
    - Encouraging its broader use in both the sell and buy-side communities, reducing barriers to access and/or working with Settlement Members of CLS to extend services.
    - Increasing the number of eligible currencies and products that can settle in CLS.

[11] Industry leadership representation for FX Derivatives also includes State Street Global Markets.
[12] Spot and forward FX form the core product and comprise approximately a 70% share of the total transaction and processing volume in the market.
[13] CLS was designed to reduce "Herstatt Risk" (the risk that one weak bank could trigger a domino effect of liquidity crises throughout the banking system), also known as systemic settlement risk, by using a combination of payment versus payment in central bank funds, multilateral payment netting and a standard legal framework, supported by a robust infrastructure. As of Sep 17, 2008, CLS settled 1,554,166 instructions a day in 17 currencies (which represent some 95% of global core traditional FX trading). Seventeen currencies are currently eligible for settlement in CLS. They are: US Dollar, Euro, GB Pound, Japanese Yen, Swiss Franc, Canadian Dollar, Australian Dollar, Swedish Krona, Danish Krone, Norwegian Krone, the Singapore Dollar, the Hong Kong Dollar, the New Zealand Dollar, the Korean Won, the South African Rand, the Israeli Shekel and the Mexican Peso.
[14] Full electronic processing meaning 90-95% of all activity.
[15] See Non-Electronically Confirmable Transactions below for further details on standardization of complex exotic transactions.

- Increasing efficiencies in standing settlement instruction (SSI) management by promoting CLS SSI Search.

- Electronic Processing:[16]
  - As previously mentioned, the SWIFT messaging infrastructure has formed the core for electronic processing in the FX market. The three primary message types and their usage, in order of complexity, are MT300 (Core FX), MT305 (Vanillas) and MT306 (Barriers). The strategic objective for electronic processing is to:
    - Increase usage of these messages by those non-users in both the dealer and buy-side communities (reducing barriers to access and/or working with service providers to extend services).
    - Enhance the message types to allow for additional product coverage.[17]
    - Implement the MT306 message by leveraging industry Working Groups to analyze, propose a solution and develop a project plan to put it into production.
  - In addition, on top of its role as a central settlement system, in 2006 CLS was enhanced to also serve as a confirmation system for Core FX. Future plans for CLS in this regard include expanding the number of confirmable FX Derivatives. Recently, NDFs were added. NDOs and Vanillas are near-term targets.
  - Based on level of message/product complexity and market-solution readiness, the sequencing of target dates for improving electronic processing in the market is intended to follow suit.
  - Metrics Reporting: By Dec 31, 2008: The Major Dealers in the OMG commit to delivering monthly cumulative trade volume plus an end-of-month snapshot of unexecuted confirmation for the five families of products to be delivered quarterly at first (inclusive of three separate months of data at each delivery), and then switching to a monthly delivery of each months data by Jul 31, 2009.
  - By Dec 31, 2009: The Major Dealers in the OMG commit to:
    - Increase electronic processing of NDF volume from roughly 25% of electronically eligible confirmable volume to 50% by greater usage of the modified SWIFT MT-300 message and/or CLS.
    - Begin electronic processing of electronically eligible NDOs by Jun 30, 2009, with expectations of capturing approximately 25% of confirmable volume by greater usage of the modified SWIFT MT-305 message by Dec 31, 2009.
    - Begin electronic processing of 10% of electronically eligible Barrier volume (Phase 1: single-level, knock-out, currency options) by greater usage of the SWIFT MT-306 message.
  - By Dec 31, 2010, the Major Dealers in the OMG commit to:
    - Increase electronic processing by an additional 10% of additional electronically eligible confirmable Barrier volume (Phase 2: deliverable double-level knock-outs, single and double-level knock-ins, single and double-level digital options) by greater usage of the SWIFT MT-306 message so that, in total, a level of approximately 20% (Phase 1 plus Phase 2) of Barrier volume will be electronically processed.
    - Work with the Emerging Markets Traders Association (EMTA) by coordinating with the lawyers, head traders and operations specialists of the member firms to agree on specific data sources, combination of data sources or the development/implementation of new data sources (which can then be published by service providers like Reuters) in order to increase the number of "standardized" non-deliverable currency pairs. Such standardization is prioritized based on the volume of affected trades and can then be leveraged to increase electronic processing of NDFs and NDOs. The greatest challenge in this process is reaching consensus (on both the rate sources and related fallback mechanism) and then introducing these standards in a controlled way in order to minimize basis risk between new and legacy transactions. The final deliverable will likely take the form of a matrix [18] such that the intersection of each row and column (representing a specific currency pair at each junction) would present the market standard rate source and fallbacks.
  - By Dec 31, 2009, the buy-side institutions in the OMG commit to:

---

[16] The percentages as provided herein to reflect the current state of the market are estimates only. Until this year, the FX market had not captured metrics around transaction volume of the derivative families. More accurate estimates will be available after these metrics are collected and the relevant base-lining is performed.

[17] Adding the Valuation-Fixing Date into an under-utilized field (77d) plus use of a Master Confirmation Agreement such that the MT300 can be used to confirm NDFs and the MT305 to confirm NDOs

[18] This matrix will likely be designed such that each emerging market currency is at the head of each row and each common settlement currency, such as USD (benchmark), EUR, JPY, AUD, and others, at the head of each column.

        - Create a buy side operations manager working group which will meet jointly with Major Dealers in the OMG to strategize on how to increase electronic processing. As solutions and the number of offerings have increased over recent years, meeting jointly will assist both sides in determining what other barriers can be addressed in order to increase buy-side engagement. A kick-off meeting is being planned for Nov 2008 where a future agenda will be discussed and a quarterly meeting schedule will be proposed.
        - Work with service providers on developing new solutions or further enhancing current offerings in terms of products and currency-pair. [19] In either case, these approaches should be those developed using industry-approved methodologies with standard message types and reconciliation rules.
        - Increase electronic processing of Vanilla and NDF volume from 5% to 40% of electronically eligible confirmable volume by greater usage of service provider offerings.[20]
- Life Cycle Event Processing:
    - There are three types of life cycle events for FX Derivatives – (i) natural events, (ii) barrier events and (iii) term-modification events.
    - Life cycle event processing is not currently a priority because FX Derivatives are almost all single-cycle or "bullet" products with only one "natural" event per transaction – that event being an exercise or fixing event at the end of the cycle which turns into a 2-day (spot) settlement or simple single-currency cash flow. Confirming these natural events is then considered duplicative because they are already captured/confirmed in the settlement process since the FX Derivative effectively converts into a spot or cash trade which is then confirmed as part of Core FX processing.
    - For Barriers, a cycle also includes a secondary event per transaction called a barrier event.[21] The occurrence is managed by each firm's risk system, and when they occur, Business counterparts immediately notify each other by phone, (which is then followed by notification between operations counterparts). The market is currently examining the risk/return benefits that the MT306 will provide in terms of the electronic processing of these barrier event notices.
    - Term-modification events include Early Terminations[22] and Novations.
        - Early Termination events are becoming an increasingly used alternative to closing an FX Derivative versus executing an equal and off-setting transaction (a more traditional method that is then deemed legally closed under FX-specific provisions of a Master Agreement).
        - As mentioned previously, FX Derivatives are significantly less subject to novation then the other products. Consequently, the need to create a Warehouse to facilitate the execution of novations has not been a priority.
        - In the case of both Early Termination and Novation, the short-dated nature of FX Derivatives reduces the need for Trade Compression because the risk "falls off the books" within a relatively short period of time.
- Non-Electronically Confirmable Transactions:
    - By Dec 31, 2010, the Major Dealers in the OMG commit to working with ISDA to increase the number of standardized templates and terms for complex exotic confirmations.
    - The process of standardization begins by looking at trade volume for any given product, followed by a comparison of each firm's documentation and a boiling-down of common terms and concepts. This leads to standard paper confirm templates which can then be more easily interpreted/captured electronically and, if deemed risk/reward effective, brought into electronic processing.
    - The next set of products the market will be working on are Variable Quantity, Average Rate and Volatility instruments (timetable still being discussed).
    - Complex exotics make up the smallest segment of FX & currency derivatives trade volume and are effectively managed by manual processing. The goal remains, however, to standardize paper contracts and create more robust best practices around such manual processing. The greatest challenge in this niche is consensus building but by addressing each product as volumes dictates, the OMG feels that key risks and activities will be effectively controlled.

[19] Such as GTSS, Misys, FXall, SWIFT or Major Dealer proprietary web-portal services.
[20] Aspirational target range of confirmable volume is between 5 and 40%; further collection of data from buy-side participants is needed to validate this target.
[21] Barrier events could trigger a transaction-termination (knock-out) or a transaction-activation (knock-in)
[22] Also referred to as Closing or Liquidation events.

Collateral Management

Collateral Management has proven to be a critical risk mitigation technique to manage counterparty credit risk. Investment by market participants over the past decade has significantly increased risk capacity in the derivative market and during recent credit market events has materially reduced losses that would otherwise have been suffered by firms. Collateral practitioners across the industry have come together to propose additional improvements to both market practice and infrastructure to reduce risk further and make collateralization a more efficient and effective risk reduction technique, and these are detailed below.

Some of these improvements have been prioritized by collateral practitioners and form the basis for specific commitments made to supervisors, while others are the subject of continuing review within the industry. In this letter, we set out both the specific commitments already made as well as the key elements of the broader roadmap for Collateral Management that practitioners are committed to develop in the coming months.

It is vital to note that the future vision for collateral management must, of necessity, span not only operational considerations but also aspects of trading practice, risk management, accounting standards and legal documentation relating to collateralization. Credit risk, by its very nature, spans asset classes and demands an integrated, cross-product approach for collateral management. The proposals for the future landscape must also take proper account of both buy-side and sell-side considerations. These factors introduce complexity to the collateral management discussion, but this field is highly inter-disciplinary in nature so without this approach, fundamental reforms will not be achieved.

- Commitments Agreed
  - Roadmap for Collateral Management: ISDA will work with its members and other industry associations to provide an industry-wide coordinated vision of key improvements desired in the collateral management space. This work will involve all relevant ISDA committees (for example, Collateral, Trading Practice, Accounting, Documentation, etc). With the collaboration of all interested parties, ISDA commits to publish these conclusions in a Roadmap for Collateral Management during May 2009. That roadmap will contain specific implementation steps and timeframes for proposed actions in 2009 and a more general framework for action beyond.
  - Forum for Industry Engagement on Collateral Management: The ISDA Collateral Committee will establish a schedule of monthly meetings of the full committee for at least the next 6 months to permit broad industry engagement in collateral management issues and to ensure that the program set out here maintains strong momentum. The Committee will establish smaller Collateral Working Groups to focus on specific topics (see below) and these will meet more frequently as required. Periodic updates on progress will be provided to supervisors for informational purposes. In addition, at mutually agreeable intervals, supervisors will be invited to participate in these meetings to facilitate communication, sharing of ideas and provision of feedback. Over the next few months, topics for additional industry discussion and investigation for possible inclusion in the longer term Roadmap for Collateral Management may include (without limitation) the following:
    - Best practices to ensure trade and position data integrity and the timeliness and accuracy of valuation data, on which accurate collateralization in turn depends.
    - Possible benefits of standards for electronic communication of margin calls between firms including the potential use of standard product definitions.
    - Changes to market practice to further mitigate the risk of collateralized derivatives between firms by tightening timeframes for margin calls and settlement and shortening cure periods, thus reducing the scale of residual unsecured exposures.
    - Common practice around the process of portfolio reconciliation, including the timing of trade file exchange, process automation across the market, and the consistency of data between trade files and the margin calls to which they relate.
    - Definition of market practice around the calculation of Exposure under the ISDA Credit Support Annexes.
    - Effective practices for collateral managers in relation to the close-out following the default of a collateralized counterparty.
    - Effective practices for collateral managers to deal with reference credit events occurring in the market.

- Ideas relating to central intermediation and optimization of margin calls between counterparties, making the margin process more efficient without necessarily affecting the fundamental bilateral nature of the credit relationship between the parties.
- Evolution of collateral management as the use of central clearing arrangements for OTC derivatives expands in the future.
- Improved consistency of approach and risk profile across different types of collateralization (e.g. OTC derivatives, repo, prime brokerage, stock borrow/loan) that may lead to greater market efficiency and more effective risk reduction.
- Potential for use of independent valuations for certain trade types in order to establish a common basis for margin calculations or dispute resolution that could remove noise in the collateralization process, provided issues relating to fair value accounting, risk management and P&L recognition can be addressed.

It is noted that several of these topics have both pros and cons, and their inclusion here for future consideration should not be considered an endorsement of the idea or a directional statement. We will also review and support other initiatives being developed within the industry as they relate to collateralization, and will adapt collateral management practice accordingly.

- Collateralized Portfolio Reconciliation: The Major Dealers in the OMG reaffirm the commitments made in the Jul 2008 letter, including the accomplishment, no later than Dec 31, 2008, of:
  - Achieving weekly inter-dealer reconciliation of collateralized portfolios exceeding 5,000 trades.
  - Provision by firms of adequate resources to identify and resolve portfolio differences on a timely basis.
  - Creation of escalation procedures for resolution of material differences within each firm and where necessary between the management of counterparty firms.

  The details of the required reconciliation standards and background rationale may be found in the ISDA Best Practice Guidance for Collateralized Portfolio Reconciliation (www.isda.org). As this best practice guidance notes, the commitments above reflect a set of standards that are pragmatic within a reasonable time frame. Their consistent accomplishment across the market professional community would lead to a material improvement over current operational and risk management practice in the collateral management area, and should form a basis for further advances in the future. It is further noted that daily portfolio reconciliations between market professionals should be a strategic goal for the industry. In regard to the 5,000 transaction threshold, this includes all trade types and asset classes documented under the relevant ISDA Master Agreement and Credit Support Annex between any pair of legal entities affiliated with Major Dealers. It should be noted that this threshold was chosen as a simple and convenient way to differentiate larger portfolios from smaller portfolios, however this should not imply in any way that portfolios below this size should not be subject to regular portfolio reconciliation: counterparties should use their judgment of the complexity and risk of a portfolio as well as its size in determining a prudent approach to portfolio reconciliation. It is anticipated that adherence to the above standards will be reviewed on an individual firm basis as part of the normal supervisory review process.
- Further Targets for Collateralized Portfolio Reconciliation: In addition, by Dec 31, 2008 the Major Dealers commit to identify follow-on targets for portfolio reconciliation to be pursued in 2009. While not yet determined, potential follow-on targets may include one or more of the following: expansion of the portfolio reconciliation best practice to a wider set of market participants, an increase in the frequency of reconciliations from weekly to daily, a reduction of the threshold of 5,000 trades to some lower number, increased transparency through the reporting of additional metrics or possibly other improvements.
- Statistics Regarding Collateralized Portfolio Reconciliation: The Major Dealers in the OMG further commit that by Dec 31, 2008, they will be able to collect and report metrics regarding their portfolio reconciliation activities to the supervisors. More specifically, this commitment will provide supervisors with a monthly report that will be submitted by the tenth working day of each month, covering the preceding calendar month. The first report will be due on Feb 13, 2009 for the month of Jan 2009. Data provided by each institution in the report will include for each other institution, performance data covering the metrics listed below and defined in Annex C:
  - Number of portfolio reconciliation cycles performed
  - Number of portfolio reconciliation cycles planned
  - Average number of portfolio trades
  - Average number of Fully Matched trades
  - Average number of Unmatched trades

    - Average number of Matched with Parameter Difference trades
    - Average number of Matched with Value Difference trades
    - Average number of Matched with both Value and Parameter Difference trades
- Review of Approaches to Margin Dispute Resolution: The ISDA Board of Directors has established a working group to (i) review the margin dispute resolution language and practices in common use across the derivative market currently, and (ii) recommend alternative and improved approaches. This is a consensus-dependent and complex area not necessarily susceptible to rapid conclusion; as such, ISDA will work toward completion of the review by Apr 30, 2009.
- Implementation Progress on the July 31 Collateral Management Commitments
    - The Major Dealers in the OMG report substantial progress toward the Dec 31, 2008 goal of weekly reconciliation of inter-dealer portfolios exceeding 5,000 trades. The table below sets out the current status of portfolio reconciliations between Major Dealers, as of Oct 22, 2008:

Performance Standard for Portfolio Reconciliations	**% of Major Dealers**
Currently performing weekly or better portfolio reconciliations with all other Major Dealers (this is the Dec 31, 2008 committed standard)	25%
Currently performing weekly or better portfolio reconciliations with >10 but fewer than all other Major Dealers	62.5%
Currently performing weekly or better portfolio reconciliations with 5 to 9 other Major Dealers	6.25%
Currently performing weekly or better portfolio reconciliations with under 5 other Major Dealers	6.25%

    - The above data is provided in summary form for public information. Simultaneously with the publication of this letter, specific data regarding each institution's current portfolio reconciliation capability with respect to each other Major Dealer is also being provided by firms via ISDA to the supervisors on a confidential basis.

Annex B

Commodities Documentation Matrix
October 30, 2008

Product	**ISDA Europe**	**ISDA North America**	**Other Europe**	**Other North America**	**ASPAC**
Natural Gas	*Fin'l: 2005 ISDA Commodity Definitions* ***(P-2005);*** *Phys: ISDA European Gas Annex* ***(P – 2005)***	*Fin'l: 2005 ISDA Commodity Definitions* ***(P-2005);*** *Phys: ISDA North American Gas Annex* ***(P – 2004)***	*NBP Terms (UK only); ZBT Terms (Belgium); TTF Terms (Dutch); EFET Agreement; Fin'l: Country Specific Master Agreement*	*NAESB and EEI forms*	*N/A*
Electricity	*Fin'l: 2005 ISDA Commodity Definitions* ***(P-2005);*** *Phys: ISDA GMTA Power Annex****(P – 2004)***	*Fin'l: 2005 ISDA Commodity Definitions (P-2005); ISDA North American Power Annex* ***(P – 2004)***	*GTMA (UK power); EFET Electricity Agreement (for Continental Europe); Fin'l: Country Specific Master Agreement*	*EEI forms and WSPP Agreement* ***(P-2008)***	*N/A*
Coal	*Fin'l: 2005 ISDA Commodity Definitions (P-2005); Phys: ISDA Global Physical Coal Annex* ***(P – 2007);*** *Confirm template* ***(in progress)***	*Fin'l: 2005 ISDA Commodity Definitions* ***(P-2005);*** *Phys: ISDA Global Physical Coal Annex* ***(P-2007);*** *NA Coal Confirm template* ***(in progress)***	*SCoTA document; EFET Coal document; Fin'l: Country Specific Master Agreement*	*CTA and EEI forms*	*N/A*
Crude Oil and Refined Products	*Fin'l: 2005 ISDA Commodity Definitions* ***(P-2005);*** *Phys: No standard documentation*	*2005 ISDA Commodity Definitions (P-2005); Phys: ISDA Crude Oil & Refined Products Annex and Confirmation* ***(P – 2008);*** *Confirm template* ***(P – 2008)***	*UK Energy Institute – FOB Crude (in progress); NWE barges (in progress); Fin'l: Country Specific Master Agreement*	*LEAP Master Agreement, Canadian Addendum (in progress)*	*Regional General Terms & Conditions for open spec naphtha under consideration (starting date TBD)*
Weather	*Fin'l: 2005 ISDA Commodity Definitions*	*Fin'l: 2005 ISDA Commodity Definitions*	*N/A*	*N/A*	*N/A*

	(P-2005); *ISDA templates for precipitation/temperature*	***(P-2005);*** *ISDA templates for precipitation/temperature*			
Emissions allowances (secondary markets only)	*Fin'l: 2005 ISDA Commodity Definitions (P-2005); ISDA EU Emissions Annex* ***(P – 2008)***	*Fin'l: 2005 ISDA Commodity Definitions (P-2005); ISDA US Emissions Annex* ***(P – 2006)***	*IETA Agreement; EFET Emissions Appendix; Country-Specific Emissions Addendum*	*N/A*	*N/A*
Freight	*Fin'l/Phys: 2005 ISDA Commodity Definitions* ***(P-2005);***	*Fin'l: 2005 ISDA Commodity Definitions* ***(P-2005);*** *Templates for swaps published* ***(P – 1997)***	*FFABA templates; Fin'l: Country Specific Master Agreement*	*N/A*	*N/A*
Bullion	*Fin'l/Phys: 2005 ISDA Commodity Definitions* ***(P-2005);***	*Fin'l: 2005 ISDA Commodity Definitions (P-2005); Templates published* ***(P – 1997)***	*LBMA templates; Fin'l: Country Specific Master Agreement*	*N/A*	*N/A*

Fin'l = Financial
Phys = Physical
P = published document

Annex C

ISDA

International Swaps and Derivatives Association, Inc.

Annex to the ISDA Best Practice Guidance for Reconciliation of Collateralized Portfolios between Derivative Market Professionals

---

Definitions of Terms Used in Metrics for Supervisory Statistical Returns Relating to Collateralized Portfolio Reconciliation

---

Field Definitions

Counterparty Name

The full legal entity name of the counterparty

Number of portfolio reconciliation cycles performed

The actual number of reconciliations performed with fresh underlying data files during the month

Number of portfolio reconciliation cycles planned

The number of reconciliations that it was planned to perform with fresh underlying data files during the month, e.g. 4 or 5 if a weekly reconciliation was planned.

Average number of portfolio trades

The numerical average of the total number of trades within the portfolios for which reconciliation cycles actually performed, rounded to the nearest whole number. A "trade" may be a trade, transaction, bargain, position or other such unit as the submitting party may consider appropriate.

Average number of Fully Matched trades

The numerical average of the final match trade numbers obtained from each of the reconciliation cycles whose status was Fully Matched, rounded to the nearest whole number. See Note A.

Average number of Unmatched trades

The numerical average of the final match trade numbers obtained from each of the reconciliation cycles whose status was Unmatched, rounded to the nearest whole number. See Note B.

Average number of Matched with Parameter Difference trades

The numerical average of the final match trade numbers obtained from each of the reconciliation cycles whose status was Matched with Parameter Difference, rounded to the nearest whole number. See Note C.

Average number of Matched with Value Difference trades

The numerical average of the final match trade numbers obtained from each of the reconciliation cycles whose status was Matched with Value Difference, rounded to the nearest whole number. See Note D.

Average number of Matched with Value and Parameter Difference trades

The numerical average of the final match trade numbers obtained from each of the reconciliation cycles whose status was Matched with Value and Parameter Differences, rounded to the nearest whole number. See Note E.

Calculation Explanatory Notes

General — Since each individual trade must be categorized as either "Fully Matched", "Unmatched" or "Matched with Parameter Difference" or "Matched with Value Difference" or "Matched with Value and Parameter Differences" the sum of these fields should equal the total trade population. While the percentage in each category should match between two counterparties, the absolute numbers may not match due to differences in trade representation protocols between firms, for example one firm representing a swap option as a single "swaption" trade while their counterparty represents the same trade as two trades, a swap and linked option.

Note A — Definition of "Matched." Where both parties recognize the existence of a trade and there exist (a) no material field level differences, and (b) no difference in mark-to-market value greater than the Tolerance, then it is considered Fully Matched. The number of such trades should by definition be identical from the perspective of both counterparties. The Tolerance shall be a mathematical expression set from time to time by ISDA and used universally by firms adhering to the Best Practice. As of the time of writing the agreed Tolerance was: USD[ ]million [23]. The Tolerance is used solely and expressly for this narrow purpose and has no applicability to the determination of margin disputes or any other purpose.

Note B — Definition of "Unmatched". From the perspective of Party A, a trade alleged by Party A but not recognized by Party B is considered unmatched. Likewise, a trade alleged by Party B but not recognized by Party A is also considered unmatched.

Note C — Definition of "Matched with Parameter Difference". Where both parties recognize the existence of a trade but there exist field level differences (other than a difference in mark-to-market value) between the two parties' representations of that trade, then it is considered Matched with Parameter Difference.

Note D — Definition of "Matched with Value Difference". Where both parties recognize the existence of a trade but there exists a difference between the two parties' representations of that trade in the mark-to-market value equal to or greater than the Tolerance (with no differences in any other fields), then it is considered Matched with Value Difference.

Note E — Definition of "Matched with Value and Parameter Differences". Where both parties recognize the existence of a trade but there exists a difference between the two parties' representations of that trade in the mark-to-market value equal to or greater than the Tolerance and there are also differences in parameters, then it is considered Matched with Value and Parameter Differences.

[23] This value intentionally left blank. It will be determined by the Portfolio Reconciliation Working Group and recommended to the ISDA Collateral Committee for adoption.