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OTC Derivatives Market Analysis
June 30, 2011

ISDA's Market Analysis is based on information published every six months by the Bank for International Settlements (BIS), as well as information from LCH.Clearnet's SwapClear (LCH) and TriOptima. ISDA supplements these sources with information on the collateralization of exposures.

Our reporting aims to integrate market data to show the impact of clearing, netting and collateral on notional amounts and risk exposures in the over-the-counter derivatives (OTC) markets. ISDA publishes the Market Analysis at regular six-month intervals building on the work presented in the BIS semiannual OTC derivatives market statistics.

Impact of FX and Clearing on Notional Outstanding

Table 1, Adjusted OTC Derivatives Market Overview, makes adjustments to BIS data to give a more consistent picture of the OTC derivatives market. It subtracts from the BIS Table 1 (p. 12) both foreign exchange (FX) contracts as well as one-half of the amount of cleared interest rate (IRS) and credit default swaps (CDS).

ISDA believes that FX contracts differ significantly from other OTC derivatives contracts. They typically reach maturity within a few months while other OTC derivatives mature over much longer periods. The US Treasury has also recommended that FX swaps and forwards be exempt from the clearing and execution requirements enacted under the Dodd-Frank Act.

The clearing of OTC derivatives transactions increases notional values by 100%. If two parties execute a $100 million swap on a bilateral basis, only one $100 million contract exists. If the same contract is executed through a clearing house it will be booked as two $100 million contracts or $200 million in total. For this reason, we reduce notionals by 50% of cleared interest rate swaps and by 50% of cleared CDS. The cleared interest rate swap data comes from LCH while the BIS now reports cleared CDS figures.

One further word about BIS data: the BIS semi-annual review is based upon a survey of large dealers and is less comprehensive than the broader survey it conducts every three years. To align the two analyses, the BIS produces an estimate of the volumes it misses in the semi-annual review. These estimates are included in the gross figures of the review but not in the figures for each product. The estimates are shows as a memo item in Table 1.

Table 1 shows that adjusted volumes of OTC derivatives increased significantly from year-end 2010 to June 30, 2011. Total notional outstanding ($491.3 trillion) is up 18% over the year-end 2010 level ($416.7 trillion). This increase in notional outstanding reverses meaningful declines in volumes in 2009 and 2010. From year-end 2007 through year-end 2010, the OTC derivatives markets decreased in size by approximately 12% when measured on this adjusted basis.

Table 1

ADJUSTED OTC DERIVATIVES MARKET OVERVIEW

(Based on data from the BIS Semiannual Review)

Notional amounts outstanding **US$ trillions**	Dec.2007	Dec.2008	Dec.2009	Dec.2010	June 2011
Total contracts - OTC derivatives	585.9	598.1	603.9	601.0	707.6
Foreign exchange adjustment	56.2	50.0	49.2	57.8	64.7
LCH SwapClear volumes, adjusted for double- counting	54.4	75.8	107.7	124.3	148.8
CDS clearing volumes, adjusted for double-counting				2.2	2.8
OTC derivatives, adjusted for FX & LCH & CDS cleared volumes	**475.3**	**472.3**	**447.0**	**416.7**	**491.3**
Memo: Unallocated	70.7	62.7	63.3	39.5	46.5

Cleared and Uncleared IRS Volumes

ISDA believes it is useful to report on industry progress in clearing, particularly in IRS, which is the OTC derivatives market's largest product. There are three reported amounts to monitor: notional amount of cleared IRS; percent of total IRS cleared; and notional amount of uncleared IRS. Two of these measures contain disincentives for risk reduction through compression. The headline measure – the amount of cleared IRS – would be reduced for cleared IRS that was compressed. Similarly, the percent of IRS cleared also would show negative results if cleared IRS were subsequently compressed. This is why the third measure, the notional amount of uncleared IRS, is the best, in ISDA's view. This measure provides no disincentives for compressing cleared IRS and, importantly, provides a positive incentive for compressing uncleared IRS.

Table 2 shows the results of clearing for IRS since 2007. With the large increase in IRS notional outstanding, the level of uncleared IRS has risen by $28.2 trillion in the past six months. It is the first increase in this important figure since before 2007. Nonetheless, clearing itself increased to $297.8 trillion (twice $148.8 trillion) and clearing still represents over half (50.8%) of all IRS.

Table 2

CLEARING RESULTS FOR IRS

(Based on BIS and LCH SwapClear data)

Notional amounts outstanding **US$ trillions**	Dec.2007	Dec.2008	Dec.2009	Dec.2010	June 2011
OTC Interest Rate Derivatives (including FRA, IRS, options)	393.1	432.1	449.9	465.3	553.9
IRS	309.6	341.1	349.3	364.4	441.6
LCH SwapClear IRS, adjusted for double-counting	54.4	75.8	107.7	124.3	148.8
IRS, adjusted for LCH cleared volumes	**255.2**	**265.4**	**241.5**	**240.0**	**292.8**
IRS volumes cleared, %	**21.3**	**28.6**	**44.6**	**51.8**	**50.8**
IRS, uncleared	**200.7**	**189.6**	**133.8**	**115.7**	**143.9**

The very large increase in reported IRS volumes suggests there may be some reporting errors particularly for the year-end 2010 figures. Table 3 below illustrates this point. It contains data from LCH SwapClear and BIS that breaks out data on cleared volumes and uncleared volumes by type of market participant. It shows that uncleared IRS with "Other Financial Institutions" was zero at year-end 2010 and reached $16.4 trillion at June 30, 2011. However, the low totals for Other Financial Institutions may also reflect differences in reporting populations. For example, some of LCH's members are not included in the BIS semi-annual survey.

Table 3

UNCLEARED IRS

(Based on LCH SwapClear data)

Notional amounts outstanding US$ trillions	Dec. 2010	June 2011
Reporting Dealers	83.2	92.1
Other Financial Institutions	0	16.4
Non-Financial Institutions	32.5	35.4
Total	**115.7**	**143.5**

LCH has just announced important news in clearing interest rate products. It is now able to clear forward rate agreements (FRAs) as well as amortizing IRS. FRAs in particular are a large product ($56 trillion) and clearing should soon make serious progress in the product.

Compression

As noted above, compression (which reduces notional outstanding and eliminates existing trades) distorts the analysis of clearing. ISDA and the industry welcome the great strides that have taken place in compression. TriOptima performs all of the compression operation in IRS and most in CDS. IRS compression began in 2003 among groups of banks organized by TriOptima. In 2010, compression began in earnest at LCH. As of June 2011, IRS compression has reached $130.1 trillion including $22.1 trillion in the first half of 2011 alone. As noted above, these figures need to be adjusted by 50% to reflect double-counting. TriOptima reports its total IRS compression cycles amount to $100.5 trillion after adjusting the LCH figures. A large majority of the 2011 compression has occurred at LCH. TriOptima and LCH report very strong levels of compression are taking place in the second half of 2011. For CDS, compression by TriOptima exceeds $71.4 trillion, including $3.2 trillion in the first half of 2011. Compression of CDS from other vendors is approximately $7.4 trillion as of June 2011 with compression in the first half amounting to $0.5 trillion.

CDS

As noted above, BIS now produces estimates for cleared CDS. As a result, it will be possible to track clearing performance in this important market. Expectations should be tempered as risk management issues are quite significant for many single-name reference entities. Table 4 on the next page, contains the results of clearing CDS products after making adjusments for double-counting. It should be noted that the BIS includes bespoke bronze trades not publicly reported by DTCC in the multi-name CDS figures. These trades are not eligible for clearing. ISDA estimates there are approximately $3.5 trillion bronze trades outstanding.

Table 4

CLEARING RESULTS FOR CDS

(Based on data from the BIS Semiannual Review)

Notional amounts outstanding US$ trillions	**Dec. 2010**	**June 2011**
Total Market	29.9	32.4
Adjustment for Clearing	2.2	2.8
Adjusted Total	**27.7**	**29.6**
% Cleared	7.9%	9.5%
Single Name	18.1	18.1
Adjustment for Clearing	.8	1.1
Adjusted Total	**17.3**	**17.0**
% Cleared	4.6%	6.5%
Multiple Names	11.8	14.3
Adjustment for Clearing	1.4	1.6
Adjusted Total	**10.4**	**12.7**
% Cleared	13.5%	12.6%

Table 4 above, shows modest progress in clearing in the 2011 first half. Significant progress in clearing will require considerably more single-name reference entities, especially sovereign, to be eligible for clearing and for client clearing to become accepted.

Risk Mitigation Benefits of Netting and Collateral

Notional principal amounts overstate exposure as they do not reflect the market value of the underlying contracts and the benefits of close-out netting and collateral.

Table 5 on the following page, shows the risk mitigation benefits of netting and collateral. The data shows continued improvements in credit metrics. Gross Market Value represents an estimate of the total positive market value of contracts held by reporting dealers plus the absolute value of contracts with negative market value with non-reporting counterparties. Gross Credit Exposure applies the benefits of netting to Gross Market Value.

In the first half of 2011, Gross Market Value declined from $21 trillion to $19.5 trillion while Gross Credit Exposure declined from $3.5 trillion to $3 trillion. Netting reduces Gross Market Value by some 85%.

Collateralization further reduces credit exposure.   For this Market Analysis, we have decided to change the method of computing our estimate of the benefits of collateralization. In the Market Analysis produced as of year end 2010, we simply used the percentage of exposure covered by collateral produced in our margin survey. This figure (73%) may overstate the benefits because it is based upon the participants in the survey which are mostly banks. The percentage is a good measure of the collateral benefits for banks but it might not be as effective a measure for the benefits to clients. We decided to use a slightly smaller figure (70%), the percentage of trades covered by collateral arrangements as a large portion of these arrangements (84%) are bilateral in nature and a large portion (96%) of CDS trades with large dealers are collateralized.

With respect to the one-way collateral arrangements, dealers are the beneficiaries of a majority of the relationships. However, dealers must post significant amounts of collateral to sovereigns but do not have a reciprocal right to receive collateral. Thus, the two amounts may offset one another.

ISDA believes 70% is a reasonable estimate of the benefits of collateral and will collect more information in future Margin Surveys to enable us to improve our estimates. On this basis, credit exposure was reduced to less than 5% of Gross Market Value (after netting and collateral) at June 30, 2011.

Expressed as a percentage of notional, at June 30, 2011, the Gross Market Value was approximately 2.8% of notional. Gross Credit Exposure after netting was 0.4% of notional and Gross Credit Exposure after netting and collateral was 0.1% of notional.

Table 5

BENEFITS OF NETTING AND COLLATERAL

(Based on data from the BIS Semiannual Review and ISDA research)

Notional amounts outstanding US$ trillions	**Dec.2007**	**Dec.2008**	**Dec.2009**	**Dec.2010**	**June 2011**
BIS Data*					
Gross Market Values, Total OTC contracts	15.80	35.28	21.54	21.30	19.52
% of Notional Amounts	**2.70%**	**5.90%**	**3.57%**	**3.54%**	**2.76%**
Gross Credit Exposure (after netting)	3.3	5.0	3.5	3.5	3.0
% of Gross Market Value	**20.6%**	**14.2%**	**16.3%**	**16.3%**	**15.2%**
% of Notional Amounts	**0.6%**	**0.8%**	**0.6%**	**0.6%**	**0.4%**
ISDA Estimates					
Exposure collateralized, average, all OTC deriv, ISDA Margin Survey	65%	66%	69%	70%	70%
Gross Credit Exposure (after netting and adjusted)	1.1	1.7	1.1	1.1	0.9
% of Gross Market Value	**7.2%**	**4.8%**	**5.1%**	**4.9%**	**4.6%**
% of Notional Amounts	**0.2%**	**0.3%**	**0.2%**	**0.2%**	**0.1%**

*Some figures have been revised by the BIS since the year-end 2010 report

Notes on data sources

LCH volumes (http://www.lchclearnet.com/swaps/volumes/) are adjusted for double-counting.

BIS figures are based on their report: Semiannual Over-The-Counter (OTC) Derivatives Markets Statistics, http://www.bis.org/statistics/derstats.htm. As noted in the report, the published data may be subject to revisions so ISDA market analysis conclusions may vary according to BIS reports.

BIS figures are adjusted for double-counting of positions between reporting institutions (Notional amounts outstanding are adjusted by halving positions vis-à-vis other reporting dealers), http://www.bis.org/publ/otc_hy1105.pdf.

ISDA Margin Surveys, http://www2.isda.org/functional-areas/research/surveys/margin-surveys.

Portfolio compression data is available at TriOptima http://www.trioptima.com/resource-center/statistics/triReduce.html, Creditex https://www.theice.com/post_trade_processing.jhtml, and Markit http://www.markit.com/en/products/data/cds-pricing/portfolio-compression.page.