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## 2012 ISDA Operations Benchmarking Survey

May 2012

The ISDA Operations Benchmarking Survey identifies and tracks operations processing trends in privately-negotiated, over-the-counter (OTC) derivatives. The results provide individual firms with a benchmark against which to measure the promptness and accuracy of their trade data capture, confirmation, and settlement procedures, as well as the level of automation of their operational processes.

[www.isda.org](http://www.isda.org)

## INTERNATIONAL SWAPS AND DERIVATIVES ASSOCIATION

Since its founding in 1985, the International Swaps and Derivatives Association has worked to make over-the-counter (OTC) derivatives markets safe and efficient.

ISDA's pioneering work in developing the ISDA Master Agreement and a wide range of related documentation materials, and in ensuring the enforceability of their netting and collateral provisions, has helped to significantly reduce credit and legal risk. The Association has been a leader in promoting sound risk management practices and processes, and engages constructively with policymakers and legislators around the world to advance the understanding and treatment of derivatives as a risk management tool.

Today, the Association has more than 815 members from 58 countries on six continents. These members include a broad range of OTC derivatives market participants: global, international and regional banks, asset managers, energy and commodities firms, government and supranational entities, insurers and diversified financial institutions, corporations, law firms, exchanges, Clearinghouses and other service providers.

ISDA's work in three key areas – reducing counterparty credit risk, increasing transparency, and improving the industry's operational infrastructure – show the strong commitment of the Association toward its primary goals; to build robust, stable financial markets and a strong financial regulatory framework.

Information about ISDA and its activities is available on the Association's web site: [www.isda.org](http://www.isda.org).

## INTRODUCTION

The ISDA Operations Benchmarking Survey identifies and tracks operations processing trends in privately-negotiated, over-the-counter (OTC) derivatives. The results provide individual firms with a benchmark against which to measure the promptness and accuracy of their trade data capture, confirmation, and settlement procedures, as well as the level of automation of their operational processes. Please note that there are various proposed and final regulations implementing the Dodd-Frank Act in the US and EMIR and MiFID/MiFIR in Europe in regard to trade reporting, processing, execution, confirmations, and settlement. The results of this survey reflect data gathered prior to the implementation of these new regulatory requirements. ISDA first conducted the Survey in 2000 and has done so annually since then.

This year, sixty ISDA member firms responded; fifty-two of those firms participated in last year's Survey as well. Appendix 1 lists the respondents, and Table 1 shows some sample characteristics. The Survey classifies respondents into three size groups based on monthly deal volumes across products.

**Table 1**  
**Firms responding to ISDA Operations Benchmarking Survey**

*Number of firms*

Size	Monthly Volume													Responded	
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2011/2012	
Large	≥3000	17	20	20	19	18	17	18	22	17	16	19	17	16	
Medium	≥500	26	23	22	25	22	18	19	22	22	16	16	18	16	
Small	<500	18	22	22	23	26	32	29	35	30	37	31	25	20	
<b>Total</b>		<b>61</b>	<b>65</b>	<b>64</b>	<b>67</b>	<b>66</b>	<b>67</b>	<b>66</b>	<b>79</b>	<b>69</b>	<b>69</b>	<b>66</b>	<b>60</b>	<b>52</b>	

Appendix 2 contains definitions of terms as used in this year's Survey. The 2012 Survey refers to respondents' activities from January 1 to December 31, 2011. All amounts are in U.S. dollars. Each firm that responds to the Survey receives an individual feedback report that compares the firm's results with the results for respondents of similar size.

The Survey covers five OTC derivative product groups: Interest Rate Derivatives, Credit Derivatives, Equity Derivatives, currency options and Commodity Derivatives. Section I of the Survey reports monthly volume statistics and Sections II through IV report statistics for trade capture, confirmation and Affirmation and settlement. Section V provides automation data by process and product, Section VI reports information on staffing levels for trade capture, confirmation and Settlement Staff and Section VII reports information regarding Industry Initiatives and Regulatory Compliance.

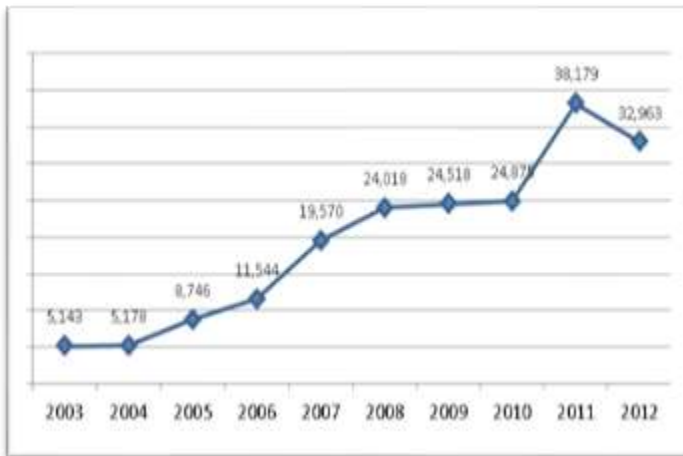
Sapient served as consultants to this year's Operations Benchmarking Survey; the consultants collected and aggregated individual responses to the Survey. All data obtained from Survey responses were kept in strict confidence. Access by ISDA and Sapient staff is strictly limited, and the data is not shared with employees of other member firms or with any other outside party.

## SURVEY RESULTS

### SECTION 1 – VOLUMES

Survey respondents were asked to report their monthly Event Volumes by product type. Charts 1.1 and 1.2 show the results for all respondents. Chart 1.1 shows that overall OTC derivative volume fell by 14 percent during 2011. Chart 1.2 shows the results by product. Overall interest rate and Equity Derivatives volumes each increased by 14 percent. In contrast, Credit Derivatives volumes decreased by 20 percent, currency options by 16 percent and Commodity Derivatives by 24 percent. In last year's Survey monthly Event Volumes for all product types increased.

**Chart 1.1**  
**Average Monthly Event Volumes, all products**  
*Number of events*



**Chart 1.2**  
**Average monthly Event Volume by product**  
*Number of events*

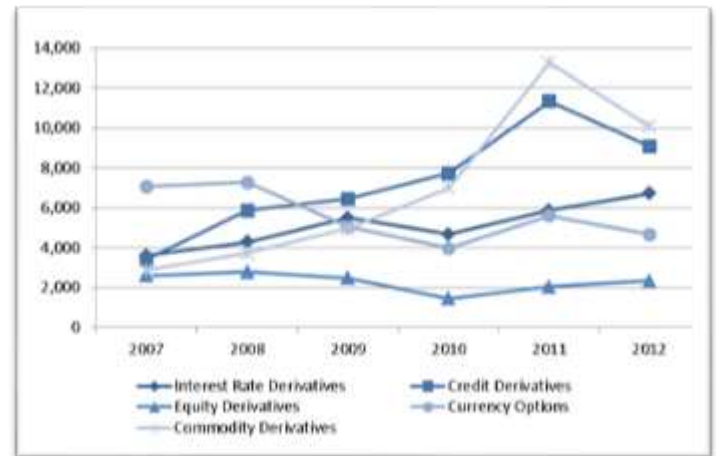


Table 1.1 shows volumes by product and firm size. Overall, volumes fell slightly for large firms, by 2 percent, but fell by 23 percent for medium firms. Small firms showed a small increase in volume of 5 percent. Interest Rate Derivatives volumes rose for large firms by 18 percent but fell for both medium and small firms by 20 percent and 30 percent respectively. Credit derivative volumes fell by 26 percent for large firms and 35 percent for small firms but rose by 52 percent for medium firms. Equity derivative volumes rose for both large and small sized firms, by 5 percent and 86 percent respectively and fell for medium firms by 32 percent. Currency option volumes fell for large and medium sized firms but rose by 21 percent for small sized firms. Commodity derivative volumes increased for all firm size categories during 2011.

**Table 1.1**  
Average monthly Event Volume, by size group

	All					Large				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Interest Rate	4,304	5,516	4,688	5,878	6,729	12,677	19,881	18,300	18,112	21,328
Credit	5,892	6,469	7,735	11,357	9,098	17,547	25,313	29,707	37,897	27,919
Equity	2,798	2,481	1,444	2,053	2,338	6,595	7,025	4,849	5,392	5,649
Currency Options	7,283	5,067	3,982	5,616	4,698	19,955	16,153	12,702	12,981	11,828
Commodity	3,741	4,985	7,025	13,275	10,099	8,346	13,600	19,271	21,893	27,592
<b>Total OTC</b>	<b>24,018</b>	<b>24,518</b>	<b>24,875</b>	<b>38,179</b>	<b>32,963</b>	<b>65,121</b>	<b>81,972</b>	<b>84,829</b>	<b>96,274</b>	<b>94,315</b>

	Medium					Small				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Interest Rate	2,060	2,674	1,817	2,486	2,000	335	418	411	591	413
Credit	680	663	665	312	473	87	64	49	122	80
Equity	703	1,366	240	1,529	1,036	255	138	82	90	167
Currency Options	1,392	2,702	1,261	5,454	3,818	315	269	233	257	312
Commodity	1,042	969	529	598	695	130	174	110	38	183
<b>Total OTC</b>	<b>5,878</b>	<b>8,374</b>	<b>4,512</b>	<b>10,380</b>	<b>8,021</b>	<b>1,122</b>	<b>1,063</b>	<b>885</b>	<b>1,098</b>	<b>1,155</b>

Table 1.2 gives summary statistics for volumes by product and firm size. The summary statistics show the dispersion in volumes within size classes. Mean and median volumes are relatively close for large firms, but differences between mean and median volume for medium and small sized firms suggest more dispersion within the results reported by firms in those categories.

**Table 1.2**  
Monthly Event Volume summary statistic, by size group

Large	Number	Average	Median	25% Quartile	75% Quartile	Maximum
Interest Rate	16	21,328	22,072	11,914	30,073	42,631
Credit	16	27,919	29,817	10,580	42,882	65,315
Equity	16	5,649	5,149	2,824	7,597	17,442
Currency Options	16	11,828	9,070	6,319	18,531	28,081
Commodity	16	27,592	24,878	8,565	39,370	85,654
Medium	Number	Average	Median	25% Quartile	75% Quartile	Maximum
Interest Rate	16	2,000	1,947	1,485	2,628	3,360
Credit	14	473	208	65	405	1,836
Equity	14	1,036	369	269	1,008	5,364
Currency Options	15	3,818	917	751	1,451	42,111
Commodity	15	695	164	110	1,024	3,146
Small	Number	Average	Median	25% Quartile	75% Quartile	Maximum
Interest Rate	25	413	350	56	550	1,396
Credit	20	80	37	10	105	402
Equity	16	167	84	15	290	560
Currency Options	23	312	112	38	570	1,000
Commodity	14	183	80	10	265	1,000

Table 1.3 shows the percentage of Event Volume that is facing a G14/G15 firm by product and firm size. Overall Credit Derivatives show a high concentration of Event Volume, over 84 percent, facing G14/G15 firms, whilst commodities is only 31 percent facing G14/G15.

**Table 1.3**  
**% of Event Volume that is facing a G14/G15 firm**

	All	Large	Medium	Small
Interest Rate	58%	54%	52%	65%
Credit	84%	75%	89%	88%
Equity	49%	34%	52%	61%
Currency Options	51%	40%	45%	62%
Commodity	31%	12%	39%	43%
Average	54%	43%	56%	64%

## SECTION II – TRADE CAPTURE

The Survey asked respondents to report the percent of trade records that have to be amended in front or back office system because of errors as well as the percent of errors attributable to Front Office Staff. Table 2.1 shows the results for the past three years.

**Table 2.1**  
**Amendment Rates**  
*By product*

	Interest Rate			Credit			Equity			Currency			Commodity		
	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
% of trade records containing errors	14%	11%	12%	13%	10%	10%	15%	11%	12%	11%	9%	10%	10%	7%	9%
% of errors attributable to front office	58%	59%	52%	56%	50%	46%	57%	46%	43%	63%	60%	54%	57%	47%	53%

The Survey also asked participants to rank error types from most common to least common. Table 2.2 shows the rankings for the five product categories. For most products, the most common errors are associated with counterparty names and with payment or termination dates. The results are consistent with those in previous years.

**Table 2.2**  
**Rankings by common sources of errors**  
*By product (with 1 being the most common)*

Cause	Interest Rate	Credit	Equity	Currency	Commodity
Counterparty Name	2	3	5	2	3
Notional Amount	7	5	6	4	4
Underlying	9	2	4	7	2
Buy / Sell	12	7	10	6	8
Trade Date / Effective Date	5	6	3	5	6
Business Day Convention	4	11	9	9	7
Mutual Early Termination	3	10	11	12	12
Payment Date(s) / Termination Date	1	4	1	1	1
Miscellaneous Fees	6	1	2	3	5
Language / Elections	10	12	7	10	9
Legal Agreement Date(s)	11	7	12	10	11
Others	8	9	8	8	9

### SECTION III – CONFIRMATIONS

The Survey asked respondents to report the proportion of Event Volume that is eligible for Electronic Confirmation as well as the proportion actually confirmed electronically. Table 3.1 shows the degree to which respondents are using electronic processing, which is measured as Electronically Confirmed Event Volume as a percentage of Electronically Eligible Event Volume. The results show that the level of electronic processing has remained constant or increased for all products overall however, for small firms, the level of electronic processing fell for Credit Derivatives, Equity Derivatives and currency options. The most significant fall was seen in Equity Derivatives where electronic processing fell from 39 percent to 11 percent during 2011.

**Table 3.1**  
**Electronically Confirmed Event Volume as a percentage of Electronically Eligible Event Volume**

	All			Large			Medium			Small		
	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
<b>Interest Rate Derivatives</b>	77%	83%	88%	79%	85%	89%	51%	74%	82%	47%	68%	74%
<b>Credit Derivatives</b>	99%	100%	100%	99%	100%	100%	99%	100%	99%	93%	98%	96%
<b>Equity Derivatives</b>	81%	70%	78%	87%	85%	87%	42%	9%	34%	19%	39%	11%
<b>Currency Options</b>	71%	67%	77%	72%	68%	75%	53%	66%	85%	61%	61%	58%
<b>Commodity Derivatives</b>	76%	66%	77%	77%	67%	78%	22%	37%	77%	70%	52%	87%

Table 3.2 shows the underlying data on which Table 3.1 is based. Credit Derivatives show the highest degree of electronic eligibility and Equity Derivatives show the lowest. The degree of electronic eligibility overall for interest rate and Credit Derivatives remains the same to that recorded in last year's Survey. Electronic eligibility has increased for Equity Derivatives and currency options but has decreased slightly for Commodity Derivatives from 87 percent in last year's Survey to 84 percent.

**Table 3.2**  
**Electronic Confirmation of Event Volume**

	Electronically Eligible		Not Electronically Eligible
	Electronically Confirmed <sup>(a)</sup>	Not Electronically Confirmed <sup>(b)</sup>	
<b>All</b>			
<b>Interest Rate Derivatives</b>	78%	10%	11%
<b>Credit Derivatives</b>	99%	0%	1%
<b>Equity Derivatives</b>	34%	9%	58%
<b>Currency Options</b>	67%	20%	14%
<b>Commodity Derivatives</b>	63%	18%	16%
<b>Large</b>			
<b>Interest Rate Derivatives</b>	81%	10%	9%
<b>Credit Derivatives</b>	99%	0%	1%
<b>Equity Derivatives</b>	39%	6%	58%
<b>Currency Options</b>	67%	22%	10%
<b>Commodity Derivatives</b>	65%	18%	15%
<b>Medium</b>			
<b>Interest Rate Derivatives</b>	51%	12%	29%
<b>Credit Derivatives</b>	71%	0%	28%
<b>Equity Derivatives</b>	14%	26%	54%
<b>Currency Options</b>	66%	11%	21%
<b>Commodity Derivatives</b>	60%	18%	16%



<b>Small</b>			
<b>Interest Rate Derivatives</b>	49%	18%	34%
<b>Credit Derivatives</b>	62%	2%	36%
<b>Equity Derivatives</b>	5%	44%	49%
<b>Currency Options</b>	32%	23%	46%
<b>Commodity Derivatives</b>	47%	7%	43%

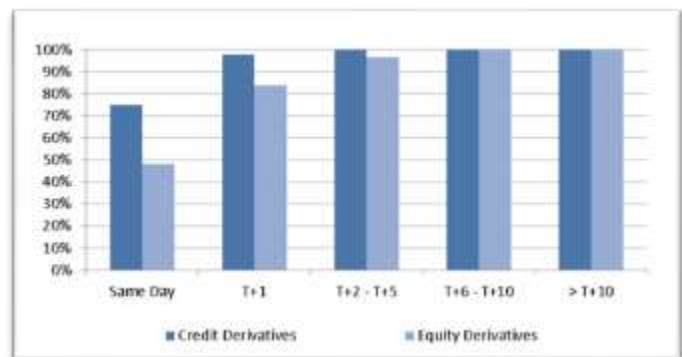
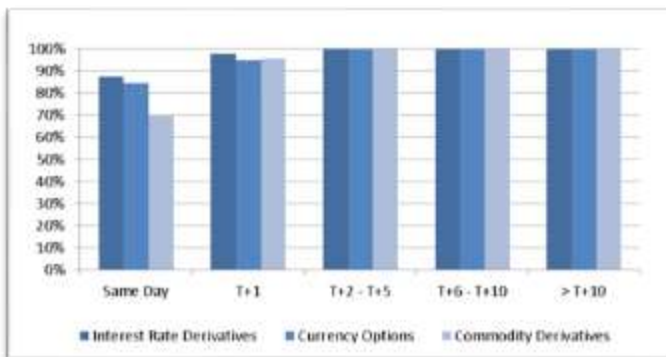
Charts 3.1 and 3.2 distinguish between electronic and non-Electronic Confirmations, where Electronic Confirmations are those submitted to an electronic platform for matching (Appendix 2).

### Charts 3.1 & 3.2

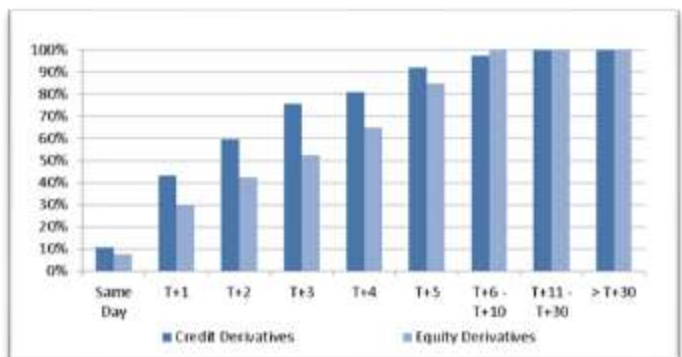
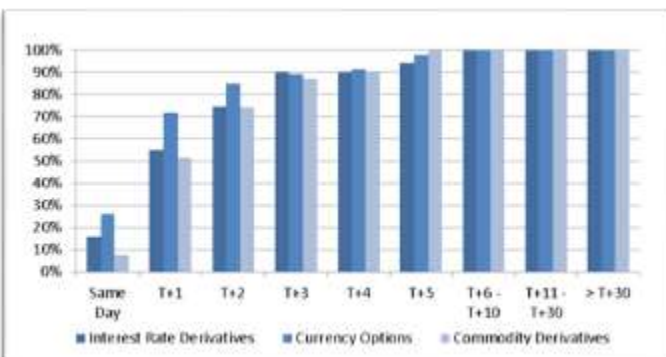
#### Confirmations normally sent by a given time, all firms

*Cumulative percentages*

#### Electronic



#### Non-electronic



Survey respondents were asked to report average monthly Outstanding Confirmations, that is, those not yet executed by month-end. Table 3.3 below reports historical data on Outstanding Confirmations expressed as day's worth of business, which is derived by multiplying the number of Outstanding Confirmations by a standard number of twenty-two business days and then dividing by monthly Event Volume. The results show that business day's worth of Outstanding Confirmations generally continue to decline or remain similar to last year's results.

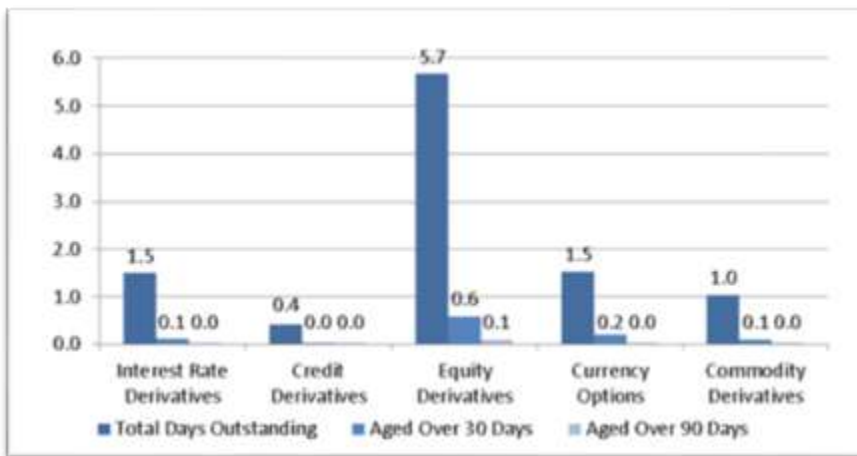
**Table 3.3**  
Average monthly levels of all confirmations outstanding  
*Business days*

	Large					Medium				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Interest Rate Derivatives	10.3	6.8	2.8	2.1	1.5	7.5	4.7	1.3	2.2	1.2
Credit Derivatives	6.4	3.5	1	0.5	0.4	4.7	2.4	1.6	0.6	0.1
Equity Derivatives	13.9	9.7	7.3	6.7	6.4	11.2	3	4.2	2.0	1.5
Currency Options	2.1	2.6	1.3	1.8	1.8	4.4	1.8	0.5	0.6	0.4
Commodity Derivatives	3.2	2.4	1.2	0.9	1.0	1.4	1.5	1	1.1	1.0

	Small				
	2008	2009	2010	2011	2012
Interest Rate Derivatives	4.8	5.4	3.5	1.8	1.9
Credit Derivatives	5.6	3.6	1.3	1.2	1.4
Equity Derivatives	3.5	9.8	7.2	6.0	4.1
Currency Options	6.2	6.4	1.3	3.3	3.1
Commodity Derivatives	4.1	2.9	1.6	7.0	1.8

The Survey also asked for monthly confirmations aged greater than 30 and greater than 90 days. Chart 3.3 compares those aged confirmations with total Outstanding Confirmations. The results show an improvement in the number of aged confirmations outstanding for all products from last year's results.

**Chart 3.3**  
All Confirmations outstanding, by age  
*Business days*



The Survey also listed a set of risk mitigation criteria used to prioritise the chasing of Outstanding Confirmations and asked respondents to rank the criteria. Table 3.4 shows the results.

**Table 3.4**  
**Criteria used to prioritize Outstanding Confirmations**  
*Rankings*

	Interest Rate	Credit	Equity	Currency	Commodity
Business Days Outstanding	1	1	1	1	1
Collateral Held / Collateral Agreement Signed	9	8	8	9	9
Master Agreement Signed	6	6	7	6	5
Net Present Value	5	5	5	5	6
Credit Rating of Counterparty	7	7	6	8	8
Type of Counterparty	3	4	3	3	4
Type of Transaction	4	3	4	4	3
Unrecognised Trade	2	2	2	2	2
Broker Confirmation Checked	8	9	9	7	7
Positive Feedback from Settlement Departments	10	10	10	10	10
Positive Feedback from Collateral Departments	12	12	11	12	11
Others	11	11	11	11	11

Table 3.5 (continued on the following page) shows the times by which respondents aim to complete the Affirmation process, with separate results for Affirmation of electronic and of non-Electronic Confirmations.

**Table 3.5**  
**Expected Affirmation times, all respondents**

Electronic	Interest Rates	Credit	Equity	Currency	Commodity
T+0	50%	60%	43%	48%	44%
T+1	44%	37%	30%	33%	44%
T+2 - T+5	6%	3%	27%	15%	6%
T+6 - T+10	0%	0%	0%	4%	6%
>T+10	0%	0%	0%	0%	0%

**Table 3.5 (continued)**  
**Expected Affirmation times, all respondents**

Non-electronic	Interest Rates	Credit	Equity	Currency	Commodity
T+0	13%	16%	3%	19%	15%
T+1	30%	32%	36%	33%	33%
T+2 - T+5	58%	52%	61%	42%	45%
T+6 - T+10	0%	0%	0%	6%	3%
>T+10	0%	0%	0%	0%	3%

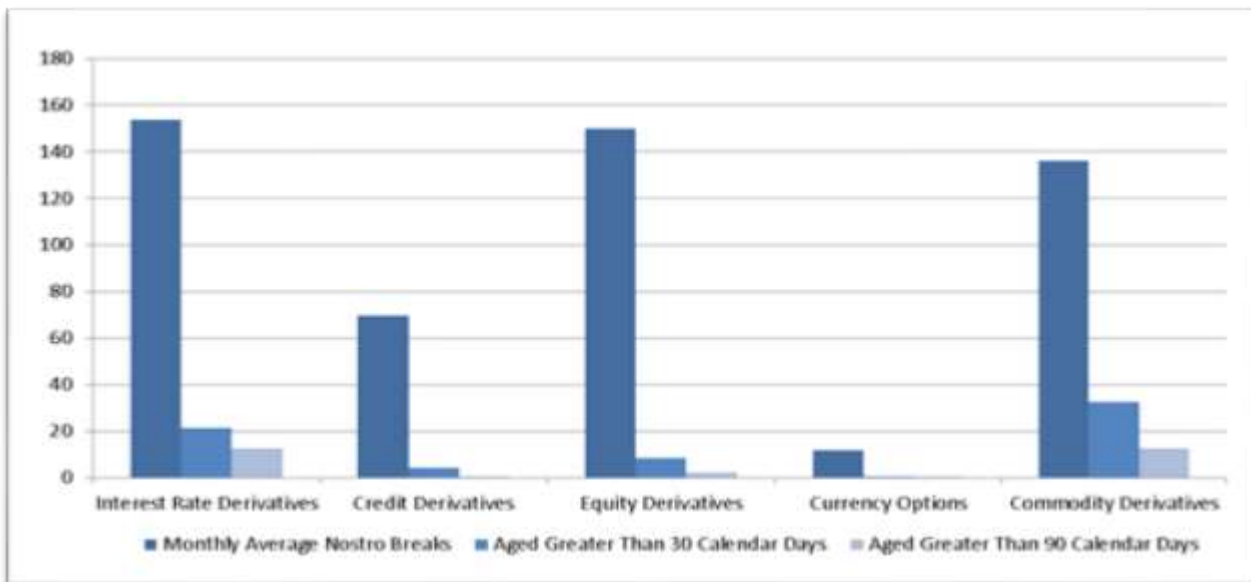
## SECTION IV – SETTLEMENTS

Table 4.1 shows the percentage of settlement volume that involves nostro breaks, that is, mismatches of expected and actual cash flows between paying and receiving institutions. The table also shows 2012 Nostro Breaks by size category. Chart 4.1 shows outstanding Nostro Breaks by product, along with breaks aged more than 30 calendar days and those aged more than 90 days.

**Table 4.1**  
Percent of monthly settlement volume resulting in Nostro Breaks

	All				2012		
	2009	2010	2011	2012	Large	Medium	Small
Interest Rate Derivatives	9%	4%	5%	4%	4%	5%	3%
Credit Derivatives	6%	4%	5%	5%	6%	5%	3%
Equity Derivatives	15%	6%	6%	7%	7%	7%	6%
Currency Options	6%	4%	6%	4%	6%	5%	3%
Commodity Derivatives	11%	5%	8%	5%	8%	5%	3%

**Chart 4.1**  
Monthly average and aged Nostro Breaks, all respondents  
*Average by product*



The Survey also asked respondents for the normal time frames for resolution of Nostro Breaks. Respondents were given choices ranging from one day to more than four weeks from the original settlement date. Table 4.2 shows the distribution of time to resolution by product.

**Table 4.2**  
**Times to Nostro Break resolution, all respondents**  
*% resolved within specified time*

	Interest Rate			Credit			Equity			Currency			Commodity		
	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
<b>1 Day</b>	10%	6%	9%	9%	11%	18%	9%	5%	10%	7%	7%	13%	16%	30%	24%
<b>2 Days</b>	22%	18%	21%	23%	26%	25%	39%	33%	35%	36%	27%	39%	28%	21%	24%
<b>3-5 Days</b>	41%	53%	55%	51%	46%	45%	36%	46%	38%	40%	54%	41%	41%	33%	34%
<b>1-2 Weeks</b>	21%	22%	13%	15%	17%	11%	14%	15%	18%	13%	12%	7%	16%	15%	16%
<b>2-4 Weeks</b>	5%	0%	2%	2%	0%	0%	2%	0%	0%	4%	0%	0%	0%	0%	3%
<b>&gt;4 Weeks</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table 4.3 shows the percentage of average monthly payments that are STP, that is, the end-to-end processing of automated data without manual intervention. Overall Interest Rate Derivatives, Credit Derivatives and currency options show the highest percentage of STP. Equity Derivatives show the lowest percentage of STP, particularly for large and medium sized firms.

**Table 4.3**  
**% of average monthly payments are STP**

	All	Large	Medium	Small
<b>Interest Rate Derivatives</b>	65%	71%	73%	54%
<b>Credit Derivatives</b>	62%	76%	66%	47%
<b>Equity Derivatives</b>	40%	23%	60%	39%
<b>Currency Options</b>	56%	70%	57%	46%
<b>Commodity Derivatives</b>	42%	49%	31%	46%
<b>Average</b>	53%	58%	57%	46%

## SECTION V – AUTOMATION

The Survey asked respondents for the percent of volume automated for seven operational processes. Table 5.1 shows the results for all respondents. The bottom row shows the average degree of automation for each product group and the far right column shows the average degree of automation by function.

**Table 5.1**  
**Degree of automation by product and function, all respondents**  
*Average percent of volume automated*

<b>Function</b>	<b>Interest Rate Derivatives</b>	<b>Credit Derivatives</b>	<b>Equity Derivatives</b>	<b>Currency Options</b>	<b>Commodity Derivatives</b>	<b>Average for function</b>
Confirmation generation - fully automated (trades confirmed through Markitwire, DTCC, Swift and other external and in-house automation systems)	61%	87%	36%	56%	30%	<b>54%</b>
Confirmation dispatch (for Non-Electronic Confirmation only)	47%	29%	36%	48%	43%	<b>40%</b>
Imaging of outgoing confirmation	62%	55%	55%	52%	48%	<b>54%</b>
Imaging of incoming confirmation	59%	54%	56%	52%	55%	<b>55%</b>
Confirmation matching (Electronic solutions offering both generation and matching / Affirmation should be counted under "Confirmation generation" and "Confirmation matching")	52%	72%	31%	45%	22%	<b>44%</b>
Nostro Reconciliation	65%	78%	64%	76%	65%	<b>70%</b>
Settlement Pre-Matching	19%	53%	23%	35%	10%	<b>28%</b>
<b>Average for Product</b>	<b>52%</b>	<b>61%</b>	<b>43%</b>	<b>52%</b>	<b>39%</b>	

## SECTION VI – STAFFING

The Survey collects data on the number of staff, expressed as Full Time Equivalents, employed to support OTC derivatives. The data includes front office as well as trade capture, confirmations and Settlements staff. Table 6.1 shows the results, expressed as ratios of front office to operational staff.

**Table 6.1**  
**Ratio of front office to support staff, all respondents**

	Front office / Trade Capture				Front office / Confirmation				Front office / Settlement			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
Interest Rate Derivatives	5.5	3.5	4.3	3.9	3.6	3.3	3.8	4.8	4.9	4.9	6.0	6.6
Credit Derivatives	4.3	3.2	3.2	3.6	3.1	3.4	3.8	5.0	3.5	3.7	4.7	6.0
Equity Derivatives	4.8	3.4	4.2	5.5	4.7	5.3	4.6	5.4	6.8	8.2	7.0	7.3
Currency Options	3.6	3.4	3.6	4.5	3.1	3.1	2.6	4.3	5.6	5.5	3.8	9.8
Commodity Derivatives	6.8	7.3	4.8	5.8	4.8	6.6	6.2	6.0	4.6	6.0	6.4	5.4

Table 6.2 presents another staffing measure, namely, trades per Full Time Equivalent staff.

**Table 6.2**  
**Transactions per full time equivalent staff**

Large	Front Office	Trade Capture	Confirmation	Settlement
Interest Rate Derivatives	79	263	342	516
Credit Derivatives	178	746	1041	1329
Equity Derivatives	22	141	137	204
Currency Options	143	763	601	2357
Commodity Derivatives	174	1193	1283	1155
Medium	Front Office	Trade Capture	Confirmation	Settlement
Interest Rate Derivatives	22	326	432	323
Credit Derivatives	33	132	319	199
Equity Derivatives	37	289	336	239
Currency Options	172	1591	2045	1762
Commodity Derivatives	33	258	283	266
Small	Front Office	Trade Capture	Confirmation	Settlement
Interest Rate Derivatives	17	84	85	93
Credit Derivatives	12	41	44	48
Equity Derivatives	16	68	75	76
Currency Options	37	71	134	115
Commodity Derivatives	26	138	103	104

The Survey asked respondents about the percent of staff that is Outsourced or in a Low Cost Location. Table 6.3 shows the results for all respondents and for large sized firms compared with the last two years results.

Table 6.3

## Percent of full time equivalent staff that is Outsourced or in a low-cost location

All	Interest Rate			Credit			Equity			Currency			Commodity		
	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
Trade Capture Staff	6%	8%	6%	8%	9%	9%	6%	3%	5%	8%	8%	11%	0%	3%	9%
Confirmation Staff	15%	20%	19%	15%	18%	17%	11%	15%	15%	22%	23%	22%	7%	11%	9%
Settlement Staff	19%	22%	22%	18%	22%	23%	17%	16%	20%	28%	27%	25%	8%	13%	12%
Large	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
Trade Capture Staff	6%	16%	8%	8%	12%	15%	6%	6%	7%	8%	14%	12%	0%	7%	14%
Confirmation Staff	15%	48%	49%	15%	50%	43%	11%	36%	32%	22%	45%	37%	7%	24%	20%
Settlement Staff	19%	52%	49%	18%	59%	49%	17%	43%	41%	28%	54%	38%	8%	27%	20%



## SECTION VII – INDUSTRY INITIATIVES

Respondents were asked if they had dedicated resources to track new Industry Initiatives and Regulatory Compliance. The results are shown in Table 7.1.

**Table 7.1**  
**Methods used by firms to track new Industry Initiatives and Regulatory Compliance**

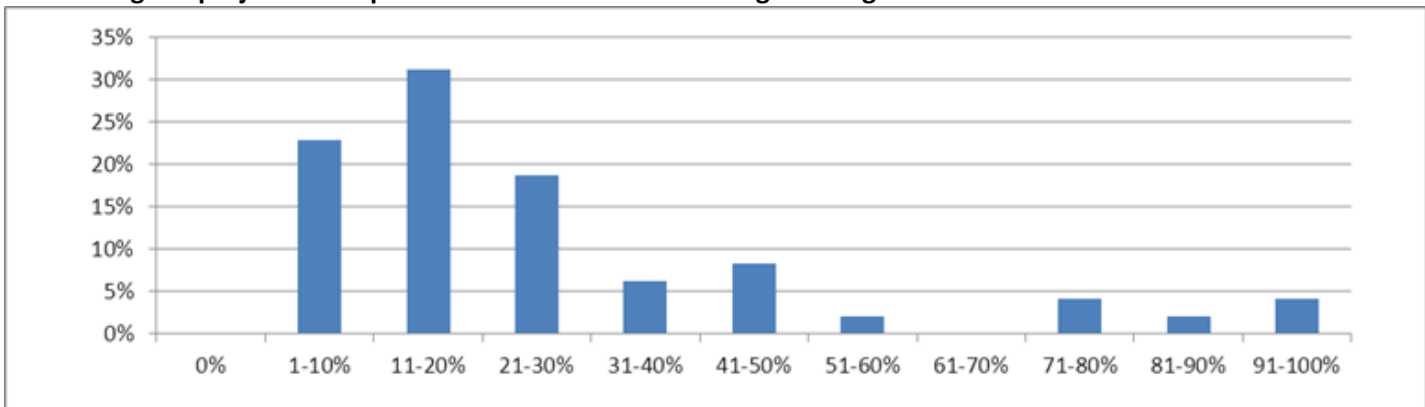
	All	Large	Medium	Small
Yes we have a team that is responsible	70%	93%	69%	58%
Yes there is an individual product expert responsible for this	20%	7%	13%	33%
No	9%	0%	19%	8%

The Survey asked respondents a number of questions regarding their approach to Clearing Initiatives. Respondents were also asked to report what percentage of their anticipated 2012 Project Portfolio would be related, either directly or indirectly to meeting Clearing Initiatives.

**Table 7.2**  
**Preferred operational approach to Clearing**  
*Rankings (1 being the most preferred)*

	All
Use Custom in-house build	1
Use Pre-packaged software	2
Out-source to a Third Party Administrator	4
Out-source to a Clearing Provider (dealer bank)	3
Others	5

**Chart 7.1**  
**Percentage of projects anticipated in 2012 related to meeting Clearing Initiatives**



Respondents were also asked to indicate if they were considering a number of factors relating to the Clearing landscape. Table 7.3 shows the results for all respondents.

**Table 7.3**  
**Consideration in the Clearing landscape**

	<b>Yes</b>	<b>No</b>
Begin Clearing before regulatory rules mandate it	85%	15%
Join global Clearing Houses	77%	23%
Join only Regional CCPs where your firm is located	36%	64%
Intend to provide FCM services in the US	30%	70%
Intend to become a Clearing Provider globally	29%	71%
Is a stake holder in the governance of a CCP	40%	60%
Wish to become a stakeholder in the governance of a CCP	30%	70%
Our firm does not plan to clear	13%	87%

**APPENDIX 1 – 2012 SURVEY PARTICIPANTS**

Aozora Bank	Mizuho Capital Markets Corp
Australia & New Zealand Banking Group Ltd	Mizuho Corporate Bank, Ltd.
Banco Bilbao Vizcaya Argentaria, S.A.	Morgan Stanley
Banco Itau BBA SA	National Australia Bank
Bank of America Merrill Lynch	National Bank of Canada
Bank of Montreal	National Bank of Greece SA
Barclays Capital	Nomura
BayernLB	Norddeutsche Landesbank Girozentrale
BlueMountain Capital Management	Northern Trust
BNP Paribas	Northern Trust Custodian
BP	PNC Bank National Association
Caisse de dépôt et placement du Québec	Prudential Global Funding LLC
Česká spořitelna a.s.	PSEG Energy Resources & Trade
Cheyne Capital Management (UK) LLP	Rabobank International
Citigroup	RBS
Commonwealth Bank of Australia	Royal Bank of Canada
Credit Suisse	Santander Bank
Daiwa Securities Capital Markets Co. Ltd.	Scotiabank
Danske Bank	SEB
DBS Bank Ltd	Société Générale
Deutsche Bank	Standard Bank of South Africa, Corporate & Investment Banking division
DNB BANK ASA	Standard Chartered
DZ BANK AG Deutsche Zentral-Genossenschaftsbank	Sumitomo Trust & Banking Co., Ltd.
Generali Investment Italy sgr	SUNTRUST
Goldman Sachs	Svenska Handelsbanken AB (publ)
HSBC	The Bank of Tokyo-Mitsubishi UFJ, Ltd.
ING Bank NV	The Chuo Mitsui Trust and Banking Company, Limited
JPMorgan	Well Fargo Bank, NA
Kiwibank Limited	Zurcher Kantonalbank
Landesbank Baden-Württemberg	
Lloyds Banking Group Plc	

## APPENDIX 2 – DEFINITIONS OF TERMS USED IN 2012 SURVEY QUESTIONNAIRE

*Affirmation:* The process by which two counterparties verify that they agree the primary economics of a trade. The Affirmation process may be done by telephone, voice recording, email or electronic checkout platform. For the purposes of Q13 of this survey, platforms offering 'Affirmation' services, e.g. MarkitWire, are not included.

*CCP:* Central Counterparty; See Definition of *Clearing House*.

*Cleared (Trade):* Derivative products Cleared centrally by a CCP. Cleared Trades may be transacted bilaterally and then transferred (or novated) to a CCP or booked directly with the CCP. Responses should include any trades that were done via a broker.

*Clearing:* See *Clearing Eligible*.

*Clearing Eligible:* The transaction is of a type that is currently Cleared by a CCP such as LCH, ICE, CME, or other Clearing organization.

*Clearing House:* A Clearing house is a financial institution that provides Clearing and settlement services for financial and commodities derivatives and securities transactions. These transactions may be executed on a futures exchange or securities exchange, as well as off-exchange in the over-the-counter (OTC) markets.

*Clearing Initiatives:* Industry Initiatives pertinent to OTC Clearing.

*Clearing Provider (Dealer Banks):* Service offering from sell-side firms offering securities Clearing, custody, order execution, settlement, and lending services to traders, hedge fund managers, broker-dealers, and investment advisors. Service might also provide operational and administrative services for registered broker dealers.

*Commodity Derivatives:* OTC derivative products that are swaps, forwards, or options in which the underlying variable is a commodity price, basket of commodity prices, or commodity price index. Common underlying commodities include precious and base metals, crude oil and other petroleum products, natural gas, electric power, freight rates, and weather. Do not include exchange-traded (listed) Commodity Derivatives.

*Confirmation Staff:* All employees involved in the confirmation of OTC derivatives trades, including drafting outgoing confirmations, chasing and reviewing incoming confirmations, investigating and reconciling confirmation discrepancies and conducting the Affirmation of key economic trade details.

*Credit Derivatives:* An over the counter (OTC) financial derivative instrument that enables the isolation and separate transfer of credit risk. For purposes of this survey, Credit Derivatives include but are not limited to credit default swaps (CDS), total return swaps, credit linked notes, and credit spread forwards and options. Underlying credits include single corporate or sovereign names, baskets, portfolios, credit indices, and obligations (and indices of obligations) such as asset backed securities (ABS), collateralized debt obligations (CDO) and leveraged loans.

*Custom in-house build:* Bespoke solutions developed in-house specifically for own firms.

*Electronic Confirmation:* The process by which derivative post-trade processes are automated. Confirmations are submitted to an electronic platform for matching. E.g. Markitwire, DTCC, Swift.

*Electronically Confirmed:* See *Electronic Confirmation*.

*Electronically Eligible:* Transactions that are eligible for matching on an industry recognised platform e.g. DTCC, MarkitWire.

*Equity Derivatives:* OTC derivative products with payments linked to the performance of equities or equity indices. For the purposes of this survey, Equity Derivatives include but are not limited to; share and index swaps and options, equity forwards, equity options, equity linked notes, relative performance trades, correlation swaps, dividend swaps and options, and variance swaps and options. Do not include exchange traded (listed) Equity Derivatives.

*Event Volume:* Number of events relating to OTC derivatives trades sent to Operations for processing during the period. The following constitute 'events' for the purpose of this Survey: new trades, confirmable amendments (i.e. any economic amendment that requires a new confirmation to be drafted), partial and full terminations, increases/decreases and novations. Exclude (i) all internal, intra-company and intra-group trades, (ii) terminations and partial terminations arising from Tri-Optima or other tear-up services and (iii) one-way notices such as corporate action notices. One structure should be reported as one trade irrespective of the number of tickets. Prime broker activity or intermediation should be reported as two trades. Allocation splits should be reported as the number of funds to which a block trade is allocated. If, due to systems constraints, you are unable to report on the above basis, please indicate so in the Supplementary Information block provided at the end of the relevant section in the Survey and provide an estimate of the percentage effect on the Event Volume reported.

*Front Office Staff:* All employees entering into OTC derivatives trades housed on front office payroll, including: traders, marketers, sales, trade assistants, structures and business managers, including staff allocated to a proprietary desk if the activity handled by such a desk is otherwise reported within this Survey. Where resources are shared across different business lines, e.g. one trade assistant for Credit Derivatives and interest rate trades, please allocate the appropriate percentage share of resource.

*Full Time Equivalents:* Percentage of time an employee (whether permanent, temporary or contractor) works represented as a decimal, e.g. a full-time person is 1.0, a person working 3 days per week is 0.6 and a person dedicating 50% of his/her time to the relevant activity is 0.5.

*G14/G15 Firms:* Group of 15 major derivatives dealers. [Barclays Capital, BNP Paribas, BOA-ML, Citi, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, JP Morgan, Morgan Stanley, Nomura (joined in August 2011), Royal Bank of Scotland, Societe Generale, UBS, Wells Fargo.]

*Industry Initiatives:* Projects resulting from a drive to implement industry best practice or process improvements.

*Interest Rates Derivatives:* OTC derivative products that involve the exchange of cash flows calculated on a notional amount using specified interest rates. For the purposes of this Survey, Interest Rate Derivatives include but are not limited to: interest rate swaps, including cross-currency swaps, forward rate agreements (FRA) and interest rate options such as caps/floors, collars, swaptions, inflation swaps, and exotic options. Do not include exchange-traded (listed) Interest Rate Derivatives.

*Low Cost Location:* Location selected for its lower operating cost (includes onshore and offshore locations).

*Non Electronic Confirmation:* Confirmation not included in the definition of Electronic Confirmation, i.e., not submitted to an electronic platform for matching.

*Nostro Break:* A mismatch of cashflows between the paying and receiving banks, which occurs when the expected amount of cash settlement differs from the actual amount.

*Nostro Reconciliation:* The process performed to ensure that the expected cash movements of a transaction (or multiple transactions) are reconciled with the actual cash movements effected.

*Outsourced:* Refers to the contracting out to an external service provider of activities that could be performed within a company.

*Outstanding Confirmations:* Total number of Electronic and Non-Electronic Confirmations not fully executed as at month end. Includes confirmations not yet drafted or issued, confirmations drafted but not yet issued, confirmations not yet received (where the counterparty is expected to draft the confirmations), confirmations issued but not yet returned and confirmations with open queries.

*Pre-packaged software:* An application program developed for sale to the general public (Off-the-Shelf) - Not customized or tailored for individual firms.

*Project Portfolio:* Series of projects organized into a single portfolio that describes project objectives, costs, timelines, accomplishments, resources, and risks.

*Regional CCPs:* CCPs that function solely for products currencies traded in particular region of operation.

*Regulatory Compliance:* Regulatory Compliance describes the evolving best practise in firms to comply with relevant laws, regulations and industry commitments.

*Reporting Period:* The data submitted should relate to the period from 1 January 2011 to 31 December 2011.

*Settlement Staff:* All employees performing settlement functions, including prematching, investigation and reconciliation of settlement fails and breaks (including Nostro breaks).

*Settlements:* For the purpose of Question 17 of the Survey, this number should represent the gross number of Settlements (both payments and receipts) before applying any netting (pre-netted Settlements).

*SSI:* Standard Settlement Instructions for derivative transactions. SSIs outline the bank account details of legal entities for specific currencies and / or products.

*STP:* "Straight Through Processing" - The end-to-end processing of automated data without manual intervention.

*Third Party Administrator:* Used by Buy-side funds, Third-Party Administrators (TPAs) to handle middle and back-office functions. TPAs also use third parties to provide independent valuations for trades, including OTC portfolios and clearing advisory.

*Trade Capture Staff:* All employees whose primary function is to book, amend and blotter all trade events into trade capture and operations systems. Additional responsibilities may include liaising with the Front and Back Office to investigate queries and Unrecognised Trades, static data maintenance, options exercise and expiry monitoring, and calculating coupon and fee payments.

*Unrecognised Trade:* Transaction that cannot be identified by the alleged counterparty to the trade.