ISDA Margin Survey 2007

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INTERNATIONAL SWAPS AND DERIVATIVES ASSOCIATION, INC.

INTERNATIONAL SWAPS AND DERIVATIVES ASSOCIATION

The International Swaps and Derivatives Association, Inc. (ISDA) is the leading global trade association representing professional market participants in privately negotiated derivative transactions. Privately negotiated derivative transactions include interest rate, currency, equity, commodity and credit swaps, options, and forward transactions, as well as related products comprising forward rate agreements, caps, floors, collars, and swaptions.

ISDA, chartered in 1985, numbers almost 800 members in 54 countries. Its members include most of the world's major commercial, universal and investment banks as well as other companies and institutions active in swaps and other privately negotiated derivatives transactions.

1. Introduction

A total of 97 ISDA member firms responded to the ISDA Margin Survey 2007; Appendix 1 lists the respondents. Table 1.1 shows the breakdown of respondents by size since the Survey was first conducted in 2000. The Survey classifies respondents into three size groups based on the number of collateral agreements executed. The threshold for classification as a large program continues to be 1,000 agreements; under this criterion, 18 firms are classified as large. Some 52 percent of respondents are based in Europe or South Africa; 25 percent in the United States or Canada; 12 percent in Japan; and 11 percent in Australia or Asia outside Japan. Table 1.2 classifies respondents according to firm or entity type. Of those responding "other", one is an asset manager, one is a non-bank financial institution, and one is a central bank.

Table 1.1 Profile of firms responding to ISDA Margin Survey 2007
Numbers of firms

Size class	Number of agreements	2007	2006	2005	2004	2003	2002	2001
Large	>1000	18	18	19	16	14	14	12
Medium	51-1000	40	43	33	33	27	25	16
Small	0-50	39	52	57	48	32	32	15
Total		97	113	109	97	73	71	43

Table 1.2 Type of entity responding to ISDA Margin Survey 2007

Type	**Number**
Bank/Broker-dealer	77
Insurer	2
Corporate	2
Mutual fund	1
Hedge fund	1
Pension fund	1
Multinational institution	3
Government agency	3
Government-sponsored entity	4
Other	3
Total	**97**

In the 2007 Survey, the questions refer to respondents' collateral management functions as of December 29, 2006. All amounts are in U.S. dollars. As with all ISDA surveys, access to firm responses is strictly limited to selected ISDA staff and the data are not shared with the employee of any ISDA member firm or any other outside party. For questions, comments, or suggestions regarding the Survey results, please contact Johanna Schwab (Policy Director, jschwab@isda.org).

2. SUMMARY

1. ISDA estimates the gross amount of collateral in use to be $1.335 trillion as of year-end 2006, an increase of 0.4 percent over the previous year. Last year's Survey, in contrast, reported a 10 percent increase.
2. The low growth rate compared with last year conceals both increases and decreases. There were significant increases in US dollar cash collateral received, but at the same time there were significant decreases in government agency securities received and in euro cash and government securities delivered.
3. Reported collateral grew by 1.8 percent among firms responding in both 2006 and 2007, compared with 9 percent the previous year. Among those 69 firms, collateral received grew by 2.7 percent and collateral delivered by 0.6 percent.
4. Cash is the most commonly used type of collateral, making up over 75 percent of collateral received and 80 percent of collateral delivered. Receipt of equities continues to grow, although it is still only 5 percent of collateral received.
5. The number of collateral agreements reported to be in place has grown to nearly nearly 133,000 compared with almost 110,000 last year. Among firms responding in both 2006 and 2007, the number of collateral agreements has grown 34 percent. Respondents forecast further growth of 26 percent during 2007.
6. Respondents report that approximately 59 percent of their derivative transactions are secured by collateral agreements and that 59 percent of mark-to-market credit exposure is covered by collateral.
7. Large firms are the most active users of collateral; these firms hold approximately 80 percent of reported collateral. Large firms also tend to report higher coverage of both trade volume and exposure, especially for credit derivatives.
8. All large programs now report that they re-use collateral, although re-use is still relatively infrequent among small programs.
9. Hedge funds, followed by institutional investors, are the largest class of counterparties for large programs. For small programs, banks and broker-dealers remain by far the most important category of counterparty.

3. Collateral assets

3.1 Volume of collateral used in market

The ISDA Margin Survey 2007 estimates the gross amount of collateral in use to be $1.335 trillion as of the end of 2006 (all results are in U.S. dollars), which represents a growth rate of 0.4% percent over the previous year. The $1.335 trillion estimate is based on a total reported collateral amount of $924 billion, and does not adjust for double counting; Appendix 2 describes the adjustment used to obtain the estimate. Chart 3.1 shows the growth of reported and estimated collateral since the 2000 ISDA Collateral Survey. Table 3.1 shows the breakdown of reported collateral by asset type.

Among the 69 firms that responded in both 2006 and 2007, collateral received grew by 2.7 percent and collateral delivered by 0.6 percent, for an overall increase of 1.8 percent. In last year's Survey, in contrast, collateral received grew by 13 percent and collateral delivered by 4 percent. Approximately 80 percent of total collateral—81 percent of collateral received and 77 percent of collateral delivered—was reported by the 18 programs classified as large.

Although the slower collateral growth might reflect in part the smaller sample size, a closer look at the numbers reveals a mixed picture of increases and decreases. On the one hand, there were significant increases in USD cash collateral received. But on the other hand, there were significant decreases in government agency securities received as well as in EUR cash and government securities delivered.

Chart 3.1 Growth of value of total reported and estimated collateral, 2000 - 2007
Billions of US dollars

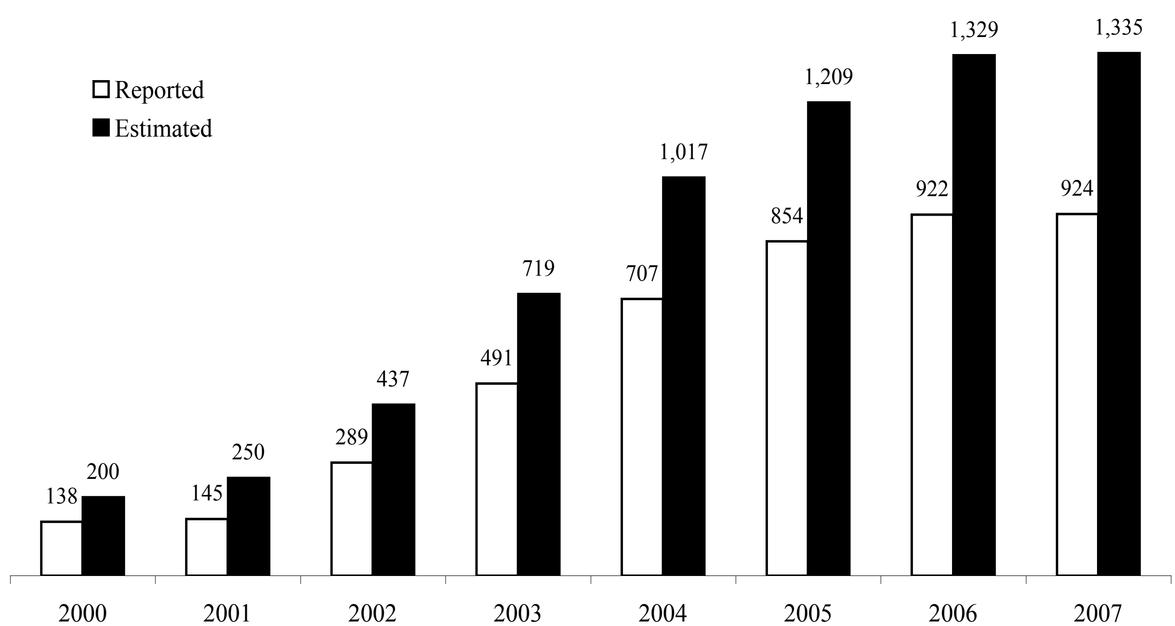


Table 3.1 Value of collateral received and delivered by respondents
By type, US dollars

		Collateral Received	Percent	Collateral Delivered	Percent
Cash	USD	252,711,741,464	45.9	171,753,669,719	46.0
	EUR	144,142,837,169	26.2	107,720,497,779	28.8
	GBP	6,080,906,697	1.1	10,137,711,628	2.7
	JPY	6,040,584,986	1.1	5,477,082,249	1.5
	Other	6,033,254,156	1.1	2,365,183,025	0.6
Subtotal		**415,009,324,471**	**75.4**	**297,454,144,401**	**79.6**
Government Securities	United States	25,243,595,468	4.6	30,646,767,280	8.2
	European Union	22,610,104,759	4.1	25,607,894,523	6.9
	United Kingdom	1,491,517,364	0.3	2,152,791,055	0.6
	Japan	9,513,252,065	1.7	4,230,918,661	1.1
	Other	4,945,713,148	0.9	2,385,462,800	0.6
Subtotal		**63,804,182,804**	**11.6**	**65,023,834,320**	**17.4**
Others	Govt. agency securities	12,268,001,187	2.2	8,347,293,614	2.2
	Supranational bonds	1,191,169,624	0.2	39,597,670	0.0
	Covered bonds	65,961,763	0.0	51,397,240	0.0
	Corporate bonds	14,243,437,598	2.6	1,093,985,925	0.3
	Letters of credit	7,788,751,758	1.4	0	0.0
	Equities	26,955,337,018	4.9	500,000,000	0.1
	Metals and commodities	594,959,251	0.1	0	0.0
	Other	8,399,788,036	1.5	1,008,197,360	0.3
Subtotal		**71,507,406,234**	**13.0**	**11,040,471,809**	**3.0**
Total collateral		**550,320,913,509**		**373,518,450,530**	
Grand total				**923,839,364,039**	

Table 3.2 Types of collateral received and delivered, by program size
Percents

		Collateral Received			Collateral Delivered		
		Large	**Medium**	**Small**	**Large**	**Medium**	**Small**
Cash	USD	48.9	23.6	55.9	49.6	27.7	18.2
	EUR	23.8	45.9	29.9	24.4	53.6	29.7
	GBP	1.2	0.4	0.0	3.2	0.6	0.2
	JPY	1.1	1.7	0.0	0.8	1.4	33.1
	Other	0.5	5.5	0.4	0.5	1.5	0.3
	Subtotal	75.5	77.0	86.2	78.5	84.8	81.3
Government Securities	United States	4.4	5.7	2.7	9.5	3.1	0.4
	European Union	4.0	4.3	9.9	7.7	2.5	11.7
	UK	0.3	0.2	0.1	0.7	0.0	0.0
	Japan	1.7	2.7	0.2	0.4	4.2	6.1
	Other	0.8	2.0	0.9	0.2	3.0	0.0
	Subtotal	11.2	14.7	13.8	18.5	12.8	18.2
Other	Agencies	2.1	2.1	0.1	2.5	1.1	0.4
	Supranationals	0.2	0.4	0.0	0.0	0.0	0.0
	Covered Bonds	0.0	0.0	0.0	0.0	0.1	0.0
	Corporate Bonds	2.8	1.1	0.0	0.2	0.4	0.0
	Letters of Credit	1.6	0.4	0.0	0.0	0.0	0.0
	Equities	4.9	3.0	0.0	0.2	0.0	0.0
	Metals and other comm.	0.1	0.0	0.0	0.0	0.0	0.0
	Others	1.4	1.2	0.0	0.2	0.8	0.0
	Subtotal	13.3	8.2	0.1	3.0	2.4	0.4

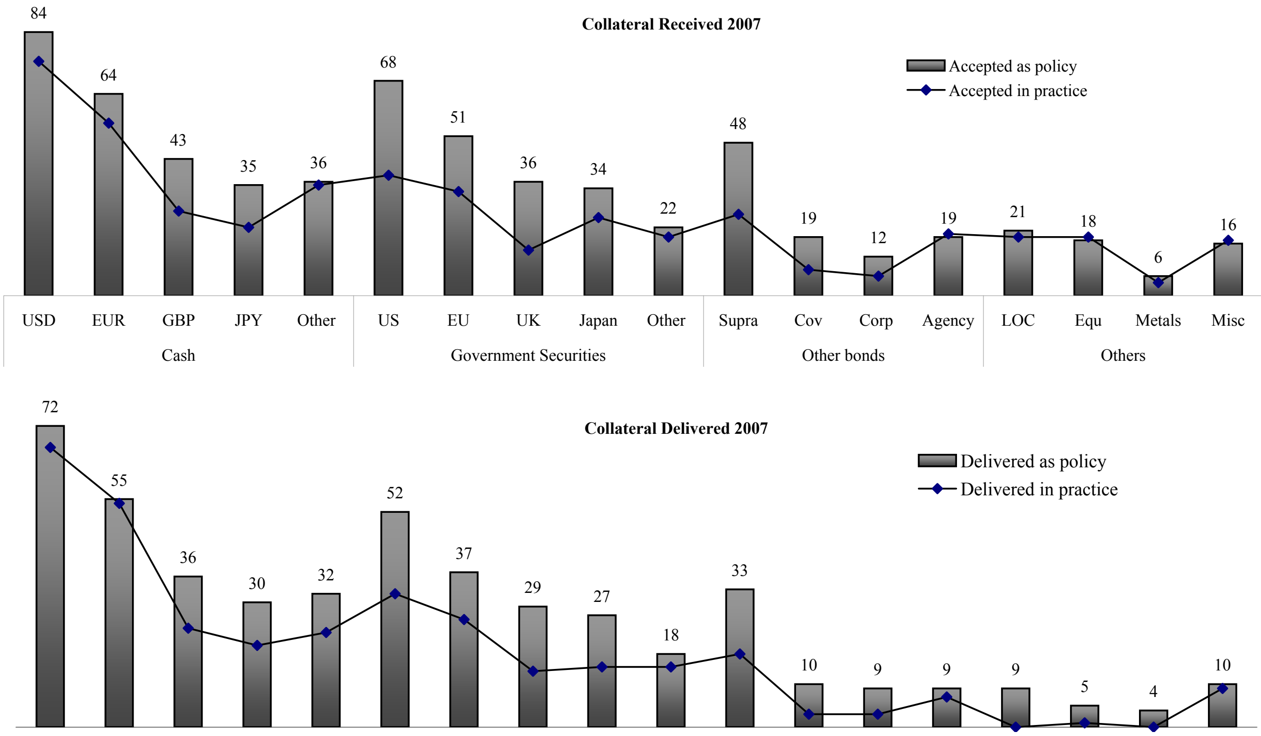
3.2 Types of assets used as collateral

Table 3.1 shows the amounts and proportions of assets used as collateral. Cash continues to dominate, at over 75 percent of collateral received and nearly 80 percent of collateral delivered. Notably, government agency securities, which had doubled in last year's Survey from 2 to over 4 percent of collateral received, has fallen back this year to its more customary level. But equities, which had increased from negligible in 2005 to over 4 percent of collateral received in 2006, increased again in 2007 to almost 5 percent, although survey respondents still tend not to deliver equities as collateral. Table 3.2 shows percentage composition of collateral received and delivered by program size.

3.3 Policies regarding assets used as collateral

Chart 3.2 compares policies regarding allowable collateral assets with actual use of the assets. A firm might, for example, allow a given asset to be used as collateral but might not in practice use it or might use different assets at different times. The chart suggests that policies regarding allowable collateral are not a binding constraint for most firms.

Chart 3.2 Collateral policy versus collateral practice, 2007 Survey
Percent of respondents



3.4 Collateral re-use

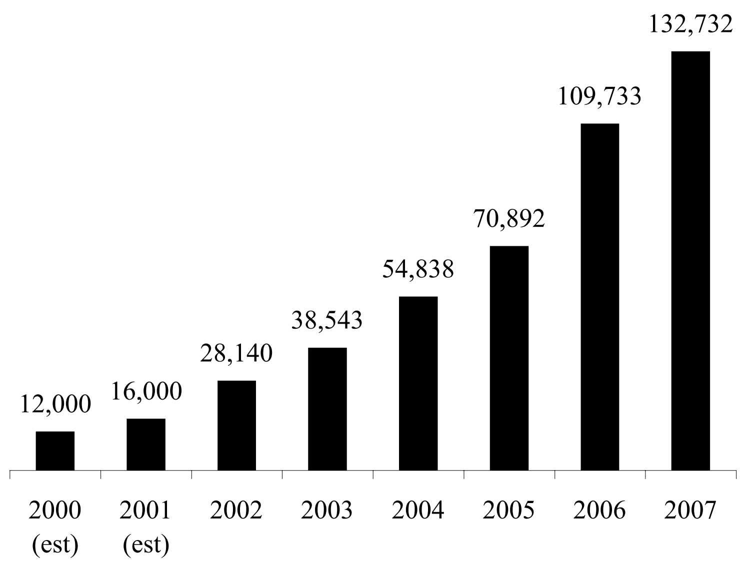
Collateral re-use is a decreasing function of program size. All of the 18 large firms report that they re-hypothecate collateral. Moving down the size scale, 24 of 40 medium programs (60 percent) report that they re-use collateral while only 7 of 39 small programs (19 percent) report that they do so.

4. Extent of collateral use

4.1 Number and types of collateral agreements

Respondents report 132,732 collateral agreements in place (Table 4.1 and Chart 4.1), compared with 109,733 in the 2006 Survey. Adjusting for sample growth by restricting the sample to those firms that responded in both years, agreements in place grew 34 percent, lower than the 57 percent reported in the 2006 Survey but more in line with results from earlier surveys (33 percent in 2005 and 29 percent in 2003). Respondents that provided a forecast expect, on average, a growth rate in new agreements of 26 percent in 2007.

Chart 4.1 Growth of collateral agreements reported by respondents, 2000-2007 Surveys



The Survey also collects data on types of agreements used. Table 4.1 shows that ISDA credit support documentation is the most frequent choice among practitioners, at 78 percent of all agreements compared with 76 percent last year. Respondents report a continuing industry trend toward bilateral agreements, at approximately 76 percent of ISDA credit support agreements compared with 74 percent last year. Only 36 percent of non-ISDA agreements, in contrast, are reported as bilateral; such agreements comprise bespoke margin agreements, long-form confirmations with collateral terms, master margining agreements, commodity specific margining agreements, and jurisdiction-specific agreements such as French AFB and German Rahmenvertrag.

Table 4.1 Numbers and types of collateral agreement used by respondents, 2007 Survey
Columns do not necessarily sum to totals

	Unilateral in your favor	Unilateral against you	Bilateral	Total	Percent
1994 ISDA Credit Support Annex New York Law (pledge)	13,741	2,096	55,534	71,371	53.8
1995 ISDA Credit Support Annex English Law (title transfer)	7,059	1,464	22,163	30,686	23.1
1995 ISDA Credit Support Deed English Law (charge)	118	36	187	341	0.3
1995 ISDA Credit Support Annex Japanese Law	468	36	800	1,303	1.0
2001 ISDA Margin Provisions	90	2	166	257	0.2
German Rahmenvertrag (Besicherungsanhang)	71	74	810	956	0.7
French AFB (Remise en Guarantie)	85	441	484	1,011	0.8
Other	16,820	1,046	8,941	26,807	20.2
Total number for 2006	**38,453**	**5,195**	**89,084**	**132,732**	

4.2 Collateral Coverage

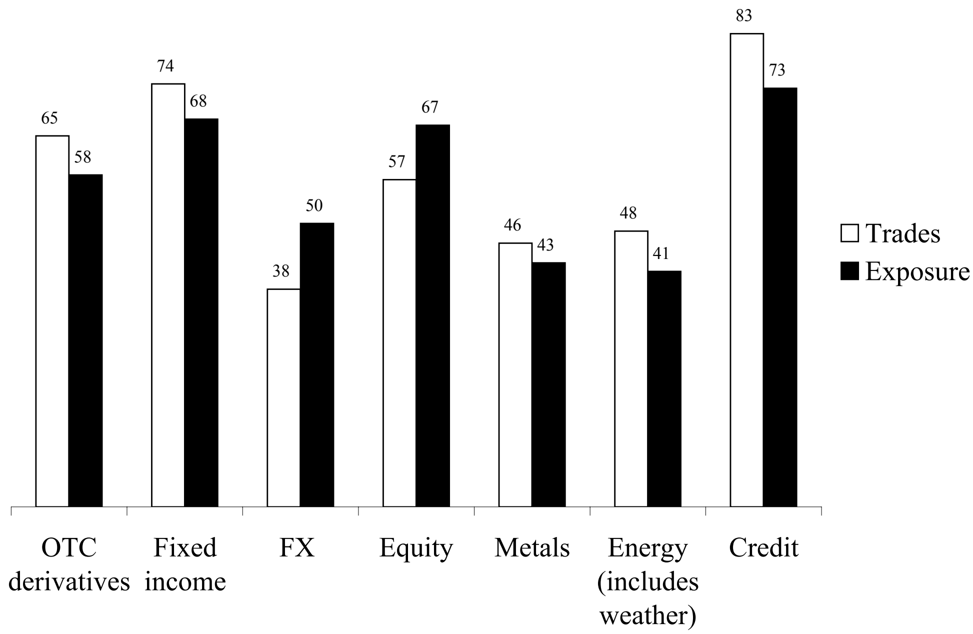
The Survey uses two measures of collateral coverage. Percent of trade volume is the number of derivative trades subject to a collateral agreement, divided by the total number of derivative trades, collateralized and uncollateralized. Percent of exposure is the sum of credit exposure for all counterparties that are collateralized, divided by the sum of exposure for all counterparties before taking collateral into account.

Table 4.2 compares the results for the full sample since 2003. This year's results suggest that both measures of collateral coverage, which have grown significantly since 2003, have again increased for most risks. Coverage is highest in fixed income and credit derivatives. Chart 4.2 shows coverage at large firms for 2007 only. Coverage levels are generally higher than for the full sample, although relative coverage from product to product is similar in the two samples; the largest difference is in credit derivatives, for which large firms report significantly higher coverage.

Table 4.2 Trade volume and exposure collateralized, 2003-07 Surveys
Percents, full sample

	Percent of Trade Volume					Percent of Exposure				
	2007	2006	2005	2004	2003	2007	2006	2005	2004	2003
OTC Derivatives	**59**	**59**	**56**	**51**	**30**	**59**	**63**	**55**	**52**	**29**
Fixed Income	62	57	58	58	53	65	57	58	55	48
FX	36	37	32	24	21	44	44	43	37	28
Equity	51	46	51	45	27	56	56	61	52	24
Metals	37	37	31	24	18	34	34	44	40	18
Energy	42	48	36	26	16	41	44	37	30	15
Credit	66	70	59	45	30	66	62	58	39	25

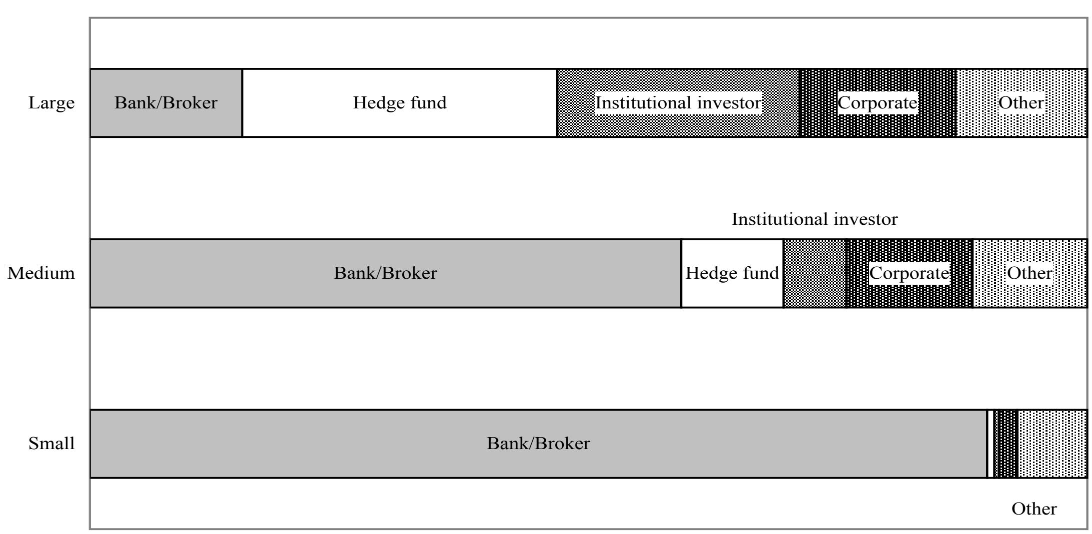
Chart 4.2 Trade volume and exposure collateralized, 2007 Survey
Percents, large programs



4.3 Counterparties of collateralized transactions

Chart 4.3 shows how counterparty mix varies across size categories. Large programs have a more diverse mix, with hedge funds making up the largest single group (32 percent) followed by institutional investors (24 percent); corporates (16 percent); banks and brokers (15 percent) and "other" counterparties (13 percent), which include commodity trading firms, special purpose vehicles, sovereigns, supranationals, private banking clients, and municipalities. Small firms, in contrast, deal almost exclusively with banks and broker-dealers at 90 percent. The distribution of collateralized counterparties by country of incorporation is similar to that in previous years, with half of respondent counterparties located in the United States and Canada, followed by Western Europe (21 percent) and the Caribbean (18 percent).

Chart 4.3 Distribution of counterparties by type



APPENDIX 1: ISDA MARGIN SURVEY 2007 PARTICIPANTS

Abbey National Treasury Services
ABN Amro Bank
Agricultural Bank of China
Alliance Bernstein LP
Aozora Bank
Australia and New Zealand Banking Group
Banca Monte dei Paschi di Siena
Banco Bilbao Vizcaya Argentaria
Banco BPI
Banco Português de Investimentos
Bank of America
Bank of New York
Bank of Tokyo-Mitsubishi UFJ
Barclays Capital
Bayerische Hypo- und Vereinsbank
BayernLB
Bear Stearns
BMO Capital Markets
BNP Paribas
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Citigroup
Commerzbank
Confederacion Espanola de Cajas de Ahorros
Credit Suisse
Danske Bank
Depfa Bank
Deutsche Asset Management
Deutsche Bank
DnB NOR Bank
Dresdner Bank
DZ Bank
EFG Eurobank Ergasias
Eksportfinans
Eksportfinans ASA
Emporiki Bank
European Bank for Reconstruction and Development
Federal Home Loan Bank of Seattle
Federal Home Loan Bank of Topeka
Freddie Mac
Goldman Sachs
Government Debt Management Agency, Hungary
HBOS Treasury Services
HSBC
HSH Nordbank
Investec Bank
JP Morgan Chase
KBC Bank
KfW Bankengruppe
Kingdom of Denmark
Kommuninvest i Sverige
Kookmin Bank
Landesbank Baden-Württemberg
Landesbank Berlin
Lehman Brothers
Lloyds TSB
Macquarie Bank
Mellon Bank
MetLife
Mitsubishi UFJ Securities
Mitsubishi UFJ Trust and Banking Corporation
Mizuho Corporate Bank
Mizuho Securities
MKP Capital
Morgan Stanley
National Australia Bank
Nikko Citigroup
Nordea Bank
Nord/LB Hannover
Norinchukin Bank
Pacific Life Insurance Company
Prudential Global Funding
Raiffeisen Zentralbank Österreich
Reserve Bank of New Zealand
Royal Bank of Canada
Royal Bank of Scotland
Sanlam Capital Markets
Shinkin Central Bank
Shinko Securities Co.
Southwest Gas Corporation
St.George Bank
Standard Chartered Bank
Stichting Pensioenfonds ABP
Sumitomo Trust & Banking Co.
Svenska Handelsbanken
Swedbank AB
Taishin International Bank
Toronto Dominion Bank
Transnet Limited
UBS
United Overseas Bank
Wachovia Bank
Westpac
Zürcher Kantonalbank

Appendix 2: Adjustment of Reported Collateral Amounts

Double counting of collateral. The objective of the ISDA Margin Survey is to estimate the importance of collateralization in the market and not simply to estimate the value of assets used as collateral. The Survey therefore tracks the gross amount of collateral—defined as the sum of all collateral delivered out and all collateral received in by Survey respondents—and does not adjust for double counting of collateral assets. Double counting takes at least two forms. The first occurs when one Survey respondent delivers collateral to or receives collateral from another respondent. The collateral assets in this case are counted twice, once as received and once as delivered. The second source of double-counting is collateral re-use—sometimes called *rehypothecation*—in which collateral is delivered from one party to another, then delivered to a third party, and so on. A single unit of re-used collateral may consequently be counted several times by the Survey as the collateral progresses down the chain of parties re-using it. But because each re-use represents the securing of a separate and distinct credit exposure between two parties, we believe it is valid to count the collateral as many times as it is used. If in contrast the objective were simply to measure the value of assets currently in use as collateral, it would then be necessary to adjust for double counting.

Adjusting for non-responding firms. In order to arrive at an industry gross amount, we adjust the reported sample results for nonparticipation in the Survey. The nonparticipation problem arises because the Margin Survey is compiled from the responses of ISDA member firms, among which large end-users of derivatives such as hedge funds are not as comprehensively represented as the dealers, investment and commercial banks. There are two possible distortions resulting from non-response to the Survey. The first occurs when two firms, neither of which has responded to the Survey, engage in an exchange of collateral with each other. The second occurs when a non-responding firm and a responding firm engage in an exchange of collateral, so the collateral posting is counted only once. We only adjust for the second; we believe the amount of collateralization that does not involve a responding firm in the ISDA sample is of minor significance.

The adjustment is based on the following calculation. First, we poll several major dealer respondents for the percentage of collateral received from and delivered to entities that responded to the Survey. We use the results to calculate an average percentage of collateral received from non-respondents and an average percentage delivered to non-respondents. We then adjust the total amount of collateral held by major dealers with non-respondents by adding in the collateral with non-respondents. The resulting number is significantly larger than that based only on reported amounts. The adjustment is conservative, however, in that it only adjusts the collateral held by the largest dealers. We therefore believe that, although the final number of $1.329 trillion is a more accurate reflection of the amount of collateral use than the estimate based solely on the Survey responses, it still understates the actual amount of collateral in circulation.

INTERNATIONAL SWAPS AND DERIVATIVES ASSOCIATION

New York
360 Madison Avenue, 16th Floor
New York, NY 10017
United States
Telephone: +1 212 901 6000

London
One Bishops Square
London E1 6A0
United Kingdom
Telephone: +44 (0)20 3088 3550

Tokyo
Shiroyama Hills, 31st Floor
4-3-1 Toranomon
Minato-ku, Tokyo 105-603
Japan
Telephone: +81 3 5733 5500

Singapore
24 Raffles Place
#24-02A Clifford Centre
Singapore 048621
Telephone: +65 6538 3879

Brussels
Rue Wiertz 50/28
B–1050 Brussels
Belgium
Telephone: +32 2 401 8760

Washington
1101 Pennsylvania Avenue, Suite 600
Washington, DC 20004
United States
Telephone: +1 202-756-2980

Website: www.isda.org
E-mail: isda@isda.org