ISDA Margin Survey 2009

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INTERNATIONAL SWAPS AND DERIVATIVES ASSOCIATION, INC.

INTERNATIONAL SWAPS AND DERIVATIVES ASSOCIATION

The International Swaps and Derivatives Association, Inc. (ISDA) is among the world's largest global financial trade associations 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 over 820 members in 57 countries on six continents. 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

ISDA conducted its first survey of collateral use in the over-the-counter derivatives industry in 2000. Since that time, the reported number of collateral agreements in place has grown from about 12,000 to almost 151,000, while the estimated amount of collateral in circulation has grown from about $200 billion to almost $4 trillion. In addition, there has been a continuing trend toward increased collateral coverage, in terms of both number of trades and amount of credit exposure.

Table 1.1 Profile of firms responding to 2009 ISDA Margin Survey
Numbers of firms

Size class	Number of agreements	2009	2008	2007	2006	2005	2004	2003	2002	2001
Large	>1000	20	20	18	18	19	16	14	14	12
Medium	51-1000	25	36	40	43	33	33	27	25	16
Small	0-50	22	51	39	52	57	48	32	32	15
Total		67	107	97	113	109	97	73	71	43

A total of 67 ISDA member firms responded to the 2009 Margin Survey; Appendix 1 lists the respondents. Table 1.1 shows some sample characteristics. 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, 20 firms are classified as large.

Table 1.2 classifies respondents according to firm or entity type.

Table 1.2 Type of entity responding to 2009 ISDA Margin Survey

Type	Number
Bank/Broker-dealer	56
Government agency	2
Government-sponsored entity	1
Insurer	2
Pension fund	1
Others	5
Total	**67**

The 2009 Survey refers to respondents' collateral management functions as of December 31, 2008. 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.

2. Summary

1. ISDA estimates that the amount collateral used in connection with over-the-counter derivatives transactions grew from $2.1 to almost $4.0 trillion during 2008, a growth rate of 86 percent, following 60 percent grow in 2007.

2. The number of reported collateral agreements in place grew to almost 151,000, of which about 87 percent are ISDA agreements. Among firms that responded last year as well as this year, collateral agreements grew by nine percent. Respondents forecast further growth of 26 percent during 2009.

3. Collateral coverage continues to grow, both in terms of trade volume subject to collateral agreements and of credit exposure covered by collateral. This reflects a long-term trend toward increased collateral coverage. For all OTC derivatives, 65 percent of trades are subject to collateral agreements, compared with 63 percent last year and 30 percent in 2003. Further, 66 percent of OTC derivative credit exposure is now covered by collateral compared with 65 percent last year and 29 percent in 2003.

4. Cash continues to grow in importance among most firms, and now stands at almost 84 percent of collateral received and 83 percent of collateral delivered. The use of government securities as collateral also grew last year. The increase in cash and government securities was balanced by a decline in the use of other forms of collateral such as corporate bonds and equities.

5. Approximately 93 percent of collateral received is held by the 20 firms that make up the large sample, and about 89 percent of collateral delivered comes from this sample.

6. Collateralized counterparties of large firms are about evenly divided between hedge funds and institutional investors, together totaling about 50 percent. Among small firms, banks and securities firms make up 90 percent of counterparties subject to collateral agreements.

7. Portfolio reconciliation, which is the verification of the existence of all outstanding trades and comparison of their principal economic terms, is considered good market practice. Approximately 55 percent of respondents state that they engage in some form of systematic portfolio reconciliation. Approximately 31 percent reconcile on a daily basis, while about nine percent reconcile weekly and six percent monthly. Another nine percent reconcile in response to disputes that arise in such matters as valuation. Nine percent of respondents stated they performed ad hoc reconciliations as needed.

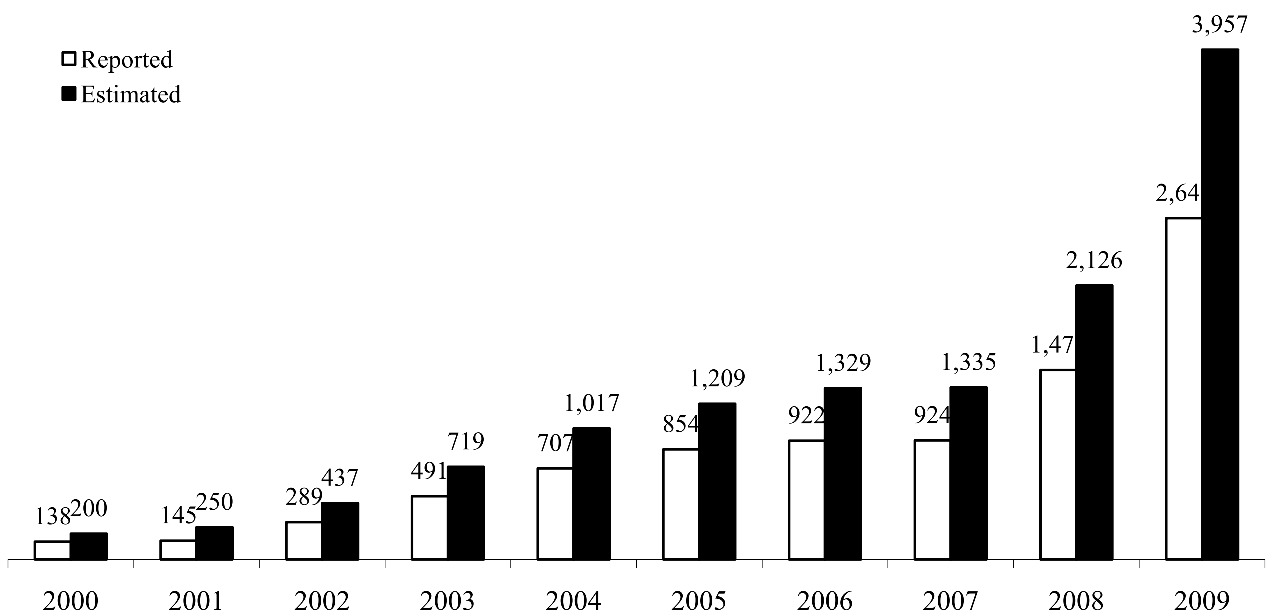
3. Collateral assets

3.1 Volume of collateral used in market

The estimated amount of collateral in use at the end of 2008 was approximately $4.0 trillion, reflecting a compound annual growth rate of 72 percent from 2006 through the end of 2008 (see Chart 3.1). During 2008 alone collateral in use grew 86 percent. Approximately 90 percent of total collateral—93 percent of collateral received and 89 percent of collateral delivered—was reported by the 20 largest firms in the sample.

The growth in collateral over the past two years is in marked contrast to that of 2006-07 period, during which estimated collateral remained essentially flat. The $4.0 trillion estimate is based on a total reported collateral amount of about $2.6 trillion; the estimation procedure is described in Appendix 2. The increase in collateral, both received and delivered, was relatively uniform across the sample and not concentrated in a few responding firms. Split between collateral received and delivered was relatively uniform across the sample and not concentrated among a few responding firms.

Chart 3.1 Growth of value of total reported and estimated collateral, 2000 - 2009
Billions of US dollars



3.2 Types of assets used as collateral

Table 3.1 shows the breakdown of reported collateral by asset category. The results reflect a continuation of the gradual trend toward increased use of cash collateral. This year's results show that the use of both cash and government securities as collateral grew relative to other instruments such as corporate bonds and equities.

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

		Collateral Received	Percent	Collateral Delivered	Percent
Cash	USD	718,507	49.4	597,418	50.0
	EUR	428,899	29.5	311,267	26.1
	GBP	32,605	2.2	39,266	3.3
	JPY	25,799	1.8	28,537	2.4
	Other	8,800	0.6	8,626	0.7
Subtotal		**1,214,610**	**83.5**	**985,114**	**82.5**
Government Securities	United States	58,246	4.0	73,540	6.2
	European Union	30,854	2.1	64,689	5.4
	United Kingdom	6,233	0.4	17,473	1.5
	Japan	25,210	1.7	20,197	1.7
	Other	10,316	0.7	4,014	0.3
Subtotal		**130,858**	**9.0**	**179,913**	**15.1**
Others	Govt. agency securities	32,074	2.2	13,298	1.1
	Supranational bonds	3,173	0.2	251	0.0
	Covered bonds	1,297	0.1	429	0.0
	Corporate bonds	22,151	1.5	6,455	0.5
	Letters of credit	15,315	1.1	200	0.0
	Equities	19,269	1.3	1,014	0.1
	Metals and commodities	743	0.1	0	0.0
	Other	15,633	1.1	7,178	0.6
Subtotal		**109,655**	**7.5**	**28,824**	**2.4**
Total collateral		**1,455,124**		**1,193,851**	
Grand total				**2,648,975**	

Table 3.2 shows percentage composition of collateral received and delivered by program size. These data show that the move toward cash collateral and government securities is shared by both large and medium firms. The small firm category shows a marked increase in the use of cash for collateral delivered at the expense of both government securities and other instruments, particularly corporate bonds and equities. Year-to-year changes in collateral types for small companies tend to vary more for the group of small firms in the sample than for that of the large and medium groups in part because of the relatively small size of the sample, but this movement may also reflect a response to the unusual financial market volatility experienced last year.

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

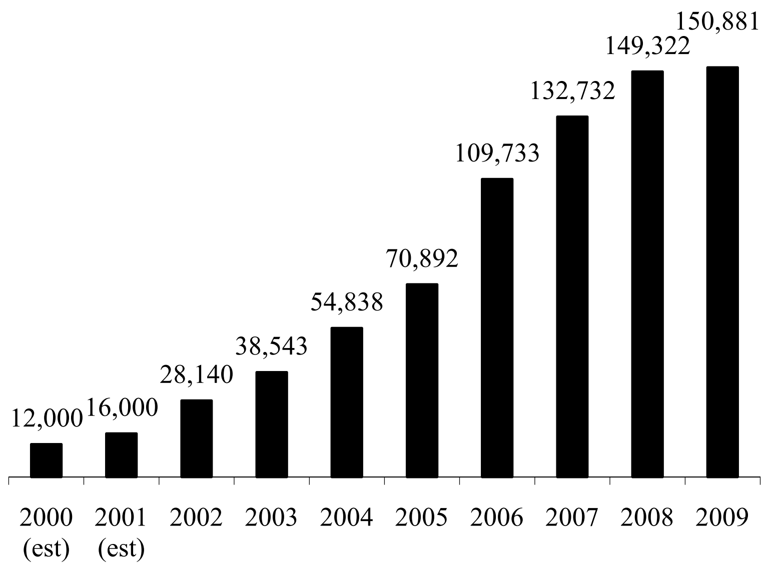
		Collateral Received			Collateral Delivered		
		Large	**Medium**	**Small**	**Large**	**Medium**	**Small**
Cash	USD	50.7	39.2	29.3	52.3	31.5	25.6
	EUR	29.1	31.1	38.4	24.0	42.6	47.7
	GBP	2.3	1.9	2.2	3.4	0.5	9.6
	JPY	1.2	4.5	13.8	1.8	7.0	10.1
	Other	0.4	3.4	1.7	0.5	2.4	3.1
	Subtotal	**83.6**	**80.0**	**85.4**	**82.1**	**84.0**	**96.1**
Government Securities	United States	4.1	4.0	2.3	6.3	5.8	0.0
	European Union	2.1	1.2	3.2	5.9	0.7	3.2
	UK	0.5	0.0	0.0	1.6	0.0	0.0
	Japan	1.2	7.8	5.4	1.5	3.6	0.6
	Other	0.6	2.6	0.0	0.1	3.0	0.0
	Subtotal	**8.5**	**15.6**	**10.9**	**15.5**	**13.2**	**3.8**
Other	Agencies	2.3	1.2	0.0	1.2	1.0	0.0
	Supranationals	0.2	0.0	2.5	0.0	0.0	0.0
	Covered Bonds	0.1	0.2	0.0	0.0	0.3	0.0
	Corporate Bonds	1.6	1.1	0.3	0.6	0.0	0.0
	Letters of Credit	1.1	0.2	0.0	0.0	0.0	0.0
	Equities	1.4	1.1	0.8	0.1	0.0	0.0
	Metals and other comm.	0.1	0.0	0.0	0.0	0.0	0.0
	Others	1.1	0.7	0.1	0.5	1.5	0.1
	Subtotal	**7.8**	**4.4**	**3.7**	**2.4**	**2.8**	**0.1**

4. Extent of collateral use

4.1 Number and types of collateral agreements

Respondents to the 2009 Margin Survey report 150,881 collateral agreements in place, compared with 149,322 in the 2007 Survey (Chart 4.1), a modest year-over-year increase. Adjusting for sample growth by restricting the sample to those firms that responded in both years, agreements grew nine percent, which is lower than the 24 percent growth predicted by respondents to last year's Survey. Respondents that provided a forecast this year expect new agreements to grow by 26 percent in 2009. Among firms with large programs, which are those firms with more than 1,000 collateral agreements in place, that responded both years collateral agreements grew by eight percent.

Chart 4.1 Growth of collateral agreements reported by respondents, 2000-2009 Surveys



The Survey also collects data on types of agreements used. Table 4.1 shows the relative use of the various agreements. (Note that the total number of agreements may be greater than the sum of the individual rows: this is because some firms reported only total number of agreements without further detail.) As in previous years, ISDA credit support documentation is the most frequent choice among practitioners at about 87 percent. Non-ISDA documents include 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. Respondents report that approximately 80 percent of their ISDA credit support agreements, and 75 percent of all agreements, are bilateral. This reflects the continuing trend toward bilateral agreements since 1998.

Table 4.1 Numbers and types of collateral agreement used by respondents, 2009 Survey
Columns do not necessarily sum to totals

	Unilateral in your favor	Bilateral	Total	Percent
1994 ISDA Credit Support Annex New York Law (pledge)	17,137	70,099	87,236	**57.8**
1995 ISDA Credit Support Annex English Law (title transfer)	8,231	33,179	41,410	**27.4**
1995 ISDA Credit Support Deed English Law (charge)	202	624	826	**0.5**
1995 ISDA Credit Support Annex Japanese Law	276	482	758	**0.5**
2001 ISDA Margin Provisions	234	100	334	**0.2**
Other	11,157	9,160	20,317	**13.5**
Total number	37,237	113,644	150,881	**100.0**

4.2 Percent of derivatives collateralized

Percent of derivatives collateralized provides evidence of the extent to which market participants use collateral to manage their counterparty exposures. To measure collateral coverage, the Survey requests data about (1) percent of trade volume that is subject to a credit support agreements (CSA), and (2) OTC derivative credit exposure covered by collateral. Percent of trade volume is the number of derivative trades subject to any collateral agreement, divided by the total number of derivative trades, collateralized and uncollateralized. Percent of exposure collateralized is the sum of credit exposure for all counterparties that are collateralized, divided by the sum of the metric for all counterparties, collateralized and uncollateralized.

Table 4.2 compares the results for the full sample since 2003. Overall, OTC derivative coverage has increased to 65 percent of trades in 2009 from 30 percent in 2003; and to 66 percent of credit exposure in 2009 from 29 percent in 2003. By either measure, increases in collateral from last year have been modest.

Table 4.2 Trade volume and exposure collateralized, 2003-2009 Survey
Percentages, full sample

	Percent of Trade Volume							Percent of Exposure						
	2009	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**	**2009**	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**
OTC Derivatives	**65**	**63**	**59**	**59**	**56**	**51**	**30**	**66**	**65**	**59**	**63**	**55**	**52**	**29**
Fixed Income	63	68	62	57	58	58	53	71	66	65	57	58	55	48
FX	36	44	36	37	32	24	21	48	55	44	44	43	37	28
Equity	52	52	51	46	51	45	27	52	56	56	56	61	52	24
Metals	39	38	37	37	31	24	18	47	41	34	34	44	40	18
Energy	39	40	42	48	36	26	16	47	39	41	44	37	30	15
Credit	71	74	66	70	59	45	30	66	66	66	62	58	39	25

Among underlying risks, fixed income derivatives now have the highest collateral coverage, in large part because they represent the largest share of financial institutions' credit exposures and attract correspondingly high coverage.

Collateral coverage as a percent of exposure for credit derivatives has remained flat at 66 percent for the past three years, although the percentage of credit derivatives trade volume subject to collateral agreements fell modestly.

Coverage for FX derivatives fell back to historical averages this year after briefly spiking in 2008. Coverage for FX derivatives has customarily been low because the majority of these instruments are low in duration relative to other derivatives. The spike in coverage observed last year is likely due to the sharp depreciation of the dollar against other currencies. This year coverage for foreign exchange trades and exposures has declined as the dollar reversed the trend of previous years and began to appreciate.

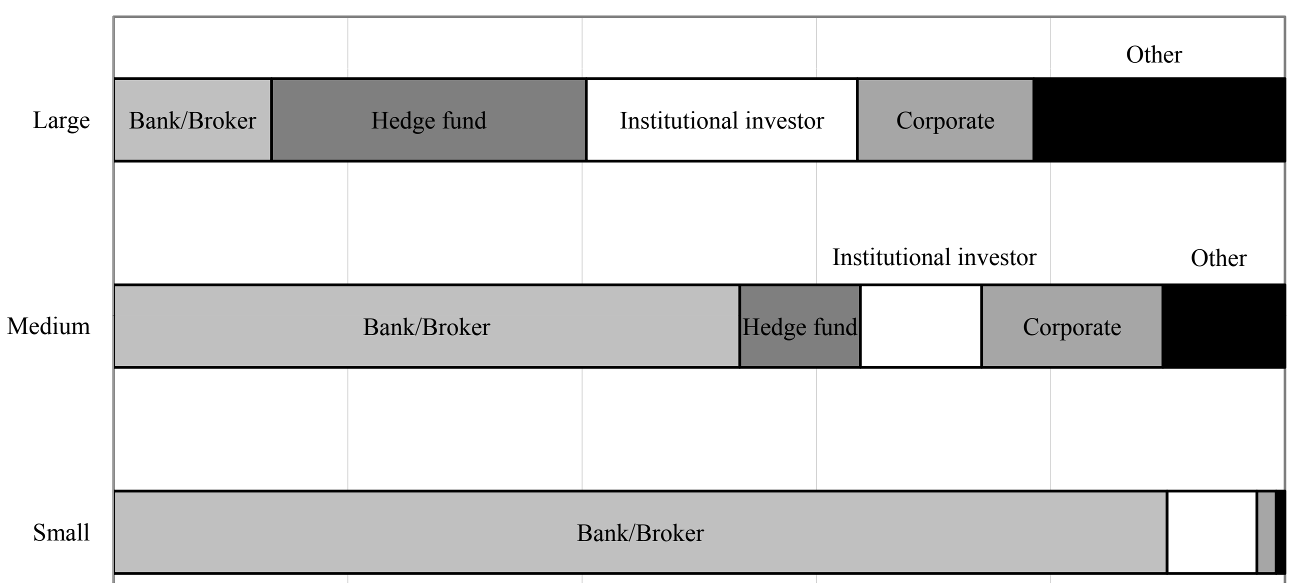
4.3 Counterparites of collateralized transactions

Chart 4.2 shows significant variation in counterparty mix across size categories. Most collateral agreements among firms with large programs are with hedge funds and institutional investors (50%), followed by Corporates (15%), Banks (13%), and Other (21%). At the other extreme, small firms, the survey respondents with the least number of collateral agreements outstanding deal mostly with other banks. Approximately half the collateral agreements at "Medium" firms are with other Banks and Corporates. Medium firms also deal with Hedge Funds and Institutional Investors, but to a relatively smaller extent than Large firms.

"Other" counterparties, which includes commodity trading firms, special purpose vehicles, sovereigns, supranationals, private banking clients, and municipalities, represent 21 percent of counterparties at large firms, 10 percent at medium firms, and 1 percent at small firms.

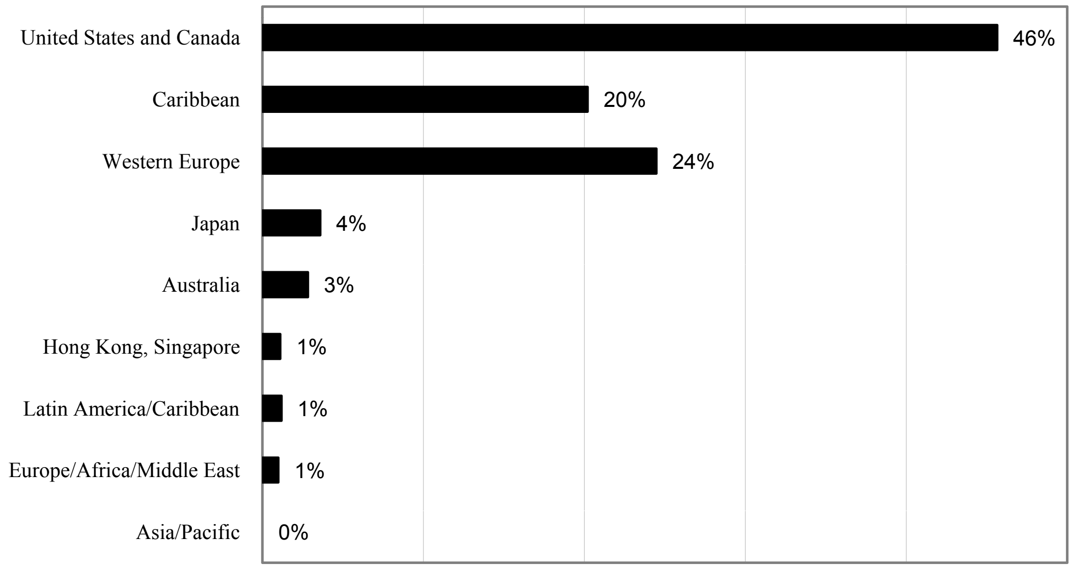
Compared to 2008, large firms have relatively more collateral agreements in place with counterparties in the Institutional Investor and Other categories. Small firms now deal almost exclusively with other Banks—they have relatively fewer collateral agreements outstanding with Hedge Funds, Corporates and Other counterparties. The counterparty mix for Medium companies has remained relatively stable.

Chart 4.2
Counterparties of collateralized transactions



As per Chart 4.3, the distribution of collateralized counterparties by country of incorporation is similar to that in previous years. Just under half (46%) of respondent counterparties are located in the United States and Canada, followed by Western Europe (24 percent) and the Caribbean (20 percent).

Chart 4.3
Geographical distribution of counterparties



4.3 Use of portfolio reconciliation by ISDA Member firms

The 2009 Survey asked firms to provide information on the portfolio reconciliation process. First, the Survey asked firms if they perform portfolio reconciliations; 80 percent of the 67 firm sample answered that they do. Second, the Survey asked firms how often they reconcile. Thirty-one percent of respondents reconcile daily (including following disputes); six reconcile weekly (9%); 4 reconcile on a monthly basis (6%); and 14 perform portfolio reconciliation only as needed (20%), generally following a dispute. Of the remaining three, frequency of portfolio reconciliation varies from quarterly to semi-annually, and even yearly, with a number of firms performing ad-hoc reconciliations as needed (4%).

Finally, the Survey asked firms to identify the department responsible for carrying out the portfolio reconciliation process. Firms responded as follows: the collateral function is responsible for portfolio reconciliations in 54 percent of firms, the operations function in 26 percent, and a dedicated portfolio reconciliation group in 22 percent; the dedicated group often sits with the collateral function. Finally, 14 percent of reconciliations are handled by a variety of functions including treasury, credit risk management, middle office, and confirmations, as well as externally by third party vendors.

Appendix 1: Firms responding to the 2008 ISDA Margin Survey

ABN Amro
Aozora Bank
ATB Financial
AXA Bank Belgium
Banca Monte dei Paschi di Siena SpA
Banco Bilbao Vizcaya Argentaria (BBVA)
Banco BPI
Bank of America
Bank of Montreal Capital Markets
Bank of New York Mellon
Bank of Tokyo-Mitsubishi UFJ
Barclays Capital
BayernLB
BNP Paribas
Caja de Ahorros y Monte de Piedad de Madrid
Calyon
Chuo Mitsui Trust and Banking
CIBC World Markets
Citigroup
Confederacion Espanola de Casas de Ahorros
Credit Suisse
Deutsche Bank
DnB NOR Bank ASA
Dresdner Bank
DZ Bank
EFG EUROBANK ERGASIAS S.A.
Eksportfinans ASA
Emporiki Bank
Freddie Mac
Goldman Sachs
Government Debt Management Agency, Hungary
Halyk Savings Bank of Kazakhstan
HSBC
JP Morgan Chase
KBC Bank
Landesbank Baden-Württemberg
Landesbank Berlin AG
LloydsTSB
Macquarie Bank
Merrill Lynch
MetLife
Mitsubishi UFJ Trust
Mizuho Capital Markets
Mizuho Corporate Bank
Morgan Stanley
National Australia Bank
Nikko Cordial Securities
Norddeutsche Landesbank Girozentrale
Nordea Bank
Pacific Life Insurance Company
Prudential Global Funding
Raiffeisen Zentralbank Österreich AG
Royal Bank of Scotland
Shinkin Central Bank
Shinko Securities
Société Générale
St. George Bank
Standard Chartered Bank
State Board of Administration of Florida
Stichting Pensioenfonds ABP
Sumitomo Trust and Banking Company
SvenskaHandelsbanken
UBS
United Overseas Bank
Wachovia Bank
Westpac Banking Corporation
Zürcher Kantonalbank

Appendix 2: Adjusting reported collateral to obtain estimated collateral

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 $3.957 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.