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# **ISDA Margin Survey 2005**

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**ISDA®**

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 over 600 members in 47 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

The ISDA Margin Survey reports on collateral use and management practices in ISDA member firms' privately-negotiated—more popularly known as over-the-counter (OTC)—derivatives activities. Since its beginning in 2000, the ISDA Margin Survey has both grown and become more streamlined.

The ISDA Margin Survey has grown from a sample of 46 responding firms in the 2000 Survey to a record 109 firms in the 2005 Survey. Further, beginning in 2004 Survey the sample was expanded to include Subscriber Member along with Primary Member firms. [Appendix 1](#) lists the respondents to this year's Survey and Table 1-1 shows some sample characteristics. Of the 109 firms responding, 87 are primary members and 22 are subscriber members. Further, 80 are banks or securities affiliates of banks and 14 are securities broker-dealers. As shown in the table, we divide respondents into three size groups based on the number of collateral agreements executed by the responding firm. The number of programs classified as small—that is, with 50 or fewer collateral agreements in place—increased by 19 percent this year. Some 50 percent of respondents are based in Europe or South Africa; 23 percent in North America; 17 percent in Japan; and 10 percent in Australia or Asia outside Japan.

**Table 1-1 Profile of firms responding to 2005 ISDA Margin Survey**

*Numbers of firms*

Size class	Number of agreements						Regional Mix in 2005 Survey			
		2005	2004	2003	2002	2001	Americas	Asia/ Pacific	Europe*	Japan
Large	>500	19	16	14	14	12	9		10	
Medium	51-500	33	33	27	25	16	6	4	18	5
Small	0-50	57	48	32	32	15	10	6	28	13
Total		109	97	73	71	43	25	10	56	18

\*Includes South Africa

As the number of respondents has grown, the Survey has become more streamlined. For example, the 2000 and 2001 Survey questionnaires were in paper form, were converted to spreadsheet form for the 2002 Survey, and moved to the internet in this year's Survey. In addition, the questionnaire has become more focused on issues of primary interest to member firms. The 2000 ISDA Collateral Survey contained 98 questions. The 2005 Survey, in contrast, consists of seven questions.

In the 2005 Survey, the questions refer to respondents' collateral management functions as of December 31, 2004. All amounts are in U.S. dollars. As with all ISDA surveys, access to firm responses was strictly limited to selected ISDA staff and the data were not shared with the employee of any ISDA member firm or any other outside party. For more information regarding data confidentiality, please contact [David Mengle](#), ISDA Head of Research.

ISDA welcomes comments on the Survey and suggestions as to how it could be further improved. Please send comments and suggestions regarding Survey content to [Johanna Schwab](#) in New York or [Peter Werner](#) in London.

## 2. SUMMARY

1. ISDA estimates that about \$1.21 trillion of collateral was in use at the beginning of 2005, a 19 percent increase from the \$1.02 trillion reported in the 2004 Survey. This estimate adjusts for collateral held by firms that did not respond to the Survey.
2. Actual collateral reported by 2005 Survey respondents is \$854 billion, compared with \$707 billion reported in the 2004 Survey. Of the 2005 reported amount, \$478 billion is collateral received and \$376 billion is collateral delivered. Reported collateral grew by 20 percent among firms responding in both 2004 and 2005.
3. Cash is the most commonly used type of collateral, making up 73 percent of collateral compared with 69 percent last year. Euro collateral received and delivered increased from 24 percent in 2004 to 28 percent in 2005.
4. Respondents to the 2005 Survey report over 70,000 collateral agreements in place. The number of collateral agreements at responding firms has grown 31 percent since the 2004 Survey. This year's respondents forecast further growth of 33 percent during 2005.
6. Respondents report that approximately 55 percent of their derivative transactions are secured by collateral agreements, as measured both by trade numbers and by mark to market exposure. This is a significant increase from the 30 percent reported in the 2003 Survey and 50 percent reported in the 2004 Survey. Equity and credit derivative coverage have increased the most since 2003, and even foreign exchange is showing increased coverage.
8. About 77 percent of medium and large programs report that they re-use collateral as a matter of policy. Among large programs, 18 out of 19 report that they re-use collateral.
5. Banks and brokers remain the most important category of counterparty overall, but hedge funds are the largest category of counterparty for large collateral management programs. Institutional investors have increased in significance for smaller programs.

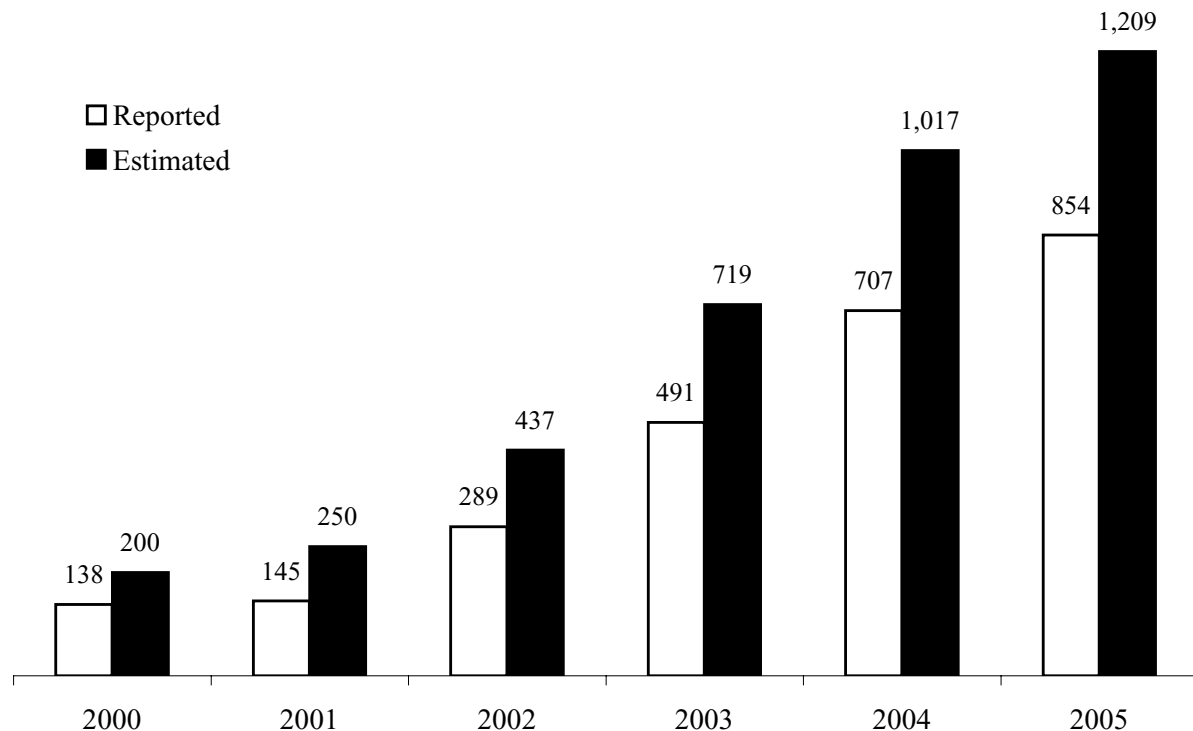
### 3. COLLATERAL ASSETS

#### 3.1 VOLUME OF COLLATERAL USED IN MARKET

The 2005 ISDA Margin Survey estimates the gross amount of collateral in use to be \$1.209 trillion, an increase of 18.9 percent over the \$1.017 trillion estimated in the 2004 Survey (all results are in U.S. dollars). The \$1.209 trillion estimate is based on a total reported collateral amount of \$853.9 billion; [Appendix 2](#) describes the adjustment used to obtain the estimated amount. Chart 3.1 shows the growth of reported and estimated collateral since the 2000 ISDA Collateral Survey. Among the 83 firms that responded in both 2004 and 2005, collateral received grew by 22 percent and collateral delivered by 18 percent, for an overall increase of 20 percent. Table 3.1 on the following page shows the breakdown of reported collateral by asset type.

**Chart 3.1 Growth of value of total reported and estimated collateral, 2000-2005**

*Millions of US dollars*



The gross amount of collateral in use measured by the 2005 Survey is subject to three main types of influence. The first set of influences involves changes in markets, both in terms of rate or price levels and of trading activity. Changes in interest or exchange rates, for example, can affect the mark to market value of existing transactions and thereby alter the amount of collateral in use. And trading activity—consisting of new trades, unwinds, maturing trades, amortization events, and other occurrences—will affect collateral levels. On balance, collateral practitioners expect collateralization to increase over time, correlated roughly with the growth trend for derivatives activity.

**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	208,501,259,777	43.7	163,579,342,726	43.5
	EUR	142,283,712,383	29.8	107,416,635,853	28.6
	GBP	11,417,503,335	2.4	10,056,644,398	2.7
	JPY	3,836,384,685	0.8	2,896,672,797	0.8
	Other	3,697,057,108	0.8	2,237,805,772	0.6
	<b>Subtotal</b>		<b>369,735,917,288</b>	<b>77.4</b>	<b>286,187,101,545</b>
Government Securities	United States	33,947,645,811	7.1	38,847,570,123	10.3
	European Union	23,404,223,249	4.9	25,200,315,811	6.7
	United Kingdom	1,024,253,436	0.2	1,211,809,462	0.3
	Japan	10,158,904,474	2.1	5,250,620,837	1.4
	Other	5,391,009,187	1.1	3,275,532,977	0.9
	<b>Subtotal</b>		<b>73,926,036,157</b>	<b>15.5</b>	<b>73,785,849,211</b>
Others	Government Agency securities	8,719,725,092	1.8	11,985,906,586	3.2
	Supranational bonds	1,159,060,126	0.2	45,000,000	0.0
	Covered bonds	652,917,341	0.1	898,400,161	0.2
	Corporate bonds	9,484,046,202	2.0	492,958,886	0.1
	Letters of credit	5,530,800,137	1.2	19,015,000	0.0
	Equities	50,305,202	0.0	599,822,032	0.2
	Metals and commodities	853,290,941	0.2	0	0.0
	Other	7,536,671,418	1.6	2,190,238,353	0.6
<b>Subtotal</b>		<b>33,986,816,459</b>	<b>7.1</b>	<b>16,231,341,018</b>	<b>4.3</b>
<b>Total collateral</b>		<b>477,648,769,904</b>		<b>376,204,291,774</b>	
<b>Grand total</b>				<b>853,853,061,678</b>	

A second set of influences is purely technical, namely, variation in currency exchange rates used for converting local currency collateral amounts into US dollars for the purpose of consolidation in the Survey. Given the decline in the dollar relative to the euro during most of 2004, along with the significant number of euro-based Survey respondents, this currency translation effect probably contributed to the increase in estimated collateral.

A third factor stems from the increase in collateral use, both in terms of number of collateral programs and number of collateral agreements. First, the number of collateral programs grew in the Survey simply because of new collateral programs being created as well as existing programs responding to the Survey for the first time; both factors will increase the reported collateral amount. Second, increased numbers of collateral agreements in use in the market will likely lead to increases in reported collateral. The execution of a new collateral agreement is likely to lead to margin calls and an increase in the amount of collateral in use.

Although the ISDA Margin Survey has shown consistent growth in the amount of collateral in use, it is conceivable that in future years the amount could decrease. The ISDA Collateral Committee believes, however, that the primary drivers of growth are the addition of new collateral programs, the inexorable

growth in the number of collateral agreements across the market, the continuing trend of increasing use of derivatives, and a growing awareness of the need to monitor, measure, and manage counterparty credit exposure.

### 3.2 TYPES OF ASSETS USED AS COLLATERAL

As in past years, USD and EUR cash remains by far the most commonly used collateral asset at 73 percent (Table 3.1), despite the expansion of types of assets accepted as collateral (see Section 3.3). The only other assets that come close to cash are U.S. and eurozone government securities. Table 3.2 shows percentage composition of collateral received and delivered by program size.

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

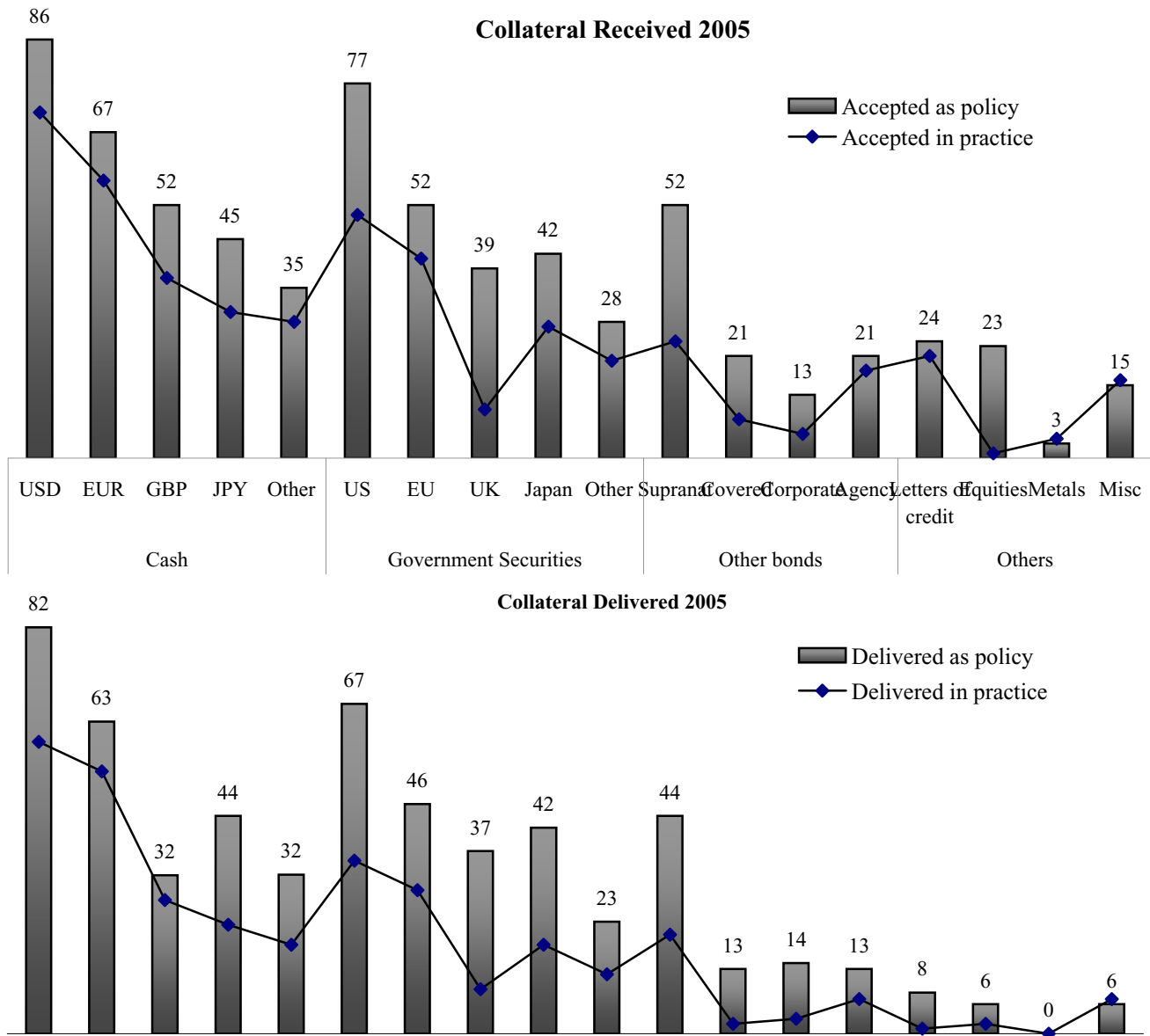
*Percents*

		Collateral Received			Collateral Delivered		
		Large	Medium	Small	Large	Medium	Small
Cash	USD	44.8	24.7	49.8	46.8	28.8	38.5
	EUR	29.0	54.2	16.9	23.2	57.0	24.3
	GBP	2.4	1.2	3.3	3.1	1.3	1.2
	JPY	0.7	1.7	1.0	0.5	1.3	2.3
	Other	0.6	2.4	0.7	0.2	0.7	5.4
	Subtotal	77.5	84.2	71.7	73.9	89.1	71.6
Government Securities	United States	7.1	4.4	9.4	12.3	3.4	3.1
	European Union	3.9	4.2	13.1	7.8	1.8	5.4
	UK	0.0	0.0	0.4	0.4	0.0	0.0
	Japan	2.2	1.8	1.8	1.0	0.6	8.1
	Other	1.2	0.6	1.2	0.8	1.2	1.0
	Subtotal	14.6	10.9	25.8	22.3	7.0	17.6
Other	Agencies	2.1	0.8	0.8	2.7	2.5	10.6
	Supranationals	0.1	1.4	0.7	0.0	0.0	0.2
	Covered Bonds	0.1	0.8	0.0	0.0	1.4	0.0
	Corporate Bonds	2.4	0.9	0.1	0.2	0.0	0.0
	Letters of Credit	1.4	0.5	0.0	0.0	0.0	0.0
	Equities	0.0	0.0	0.0	0.2	0.0	0.0
	Metals and other comm.	0.2	0.0	0.0	0.0	0.0	0.0
	Others	1.8	0.4	0.9	0.7	0.0	0.1
Subtotal	8.0	4.8	2.5	3.8	4.0	10.8	

### 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. Chart 3.2 suggests that policies regarding allowable collateral are not a binding constraint for most firms.

**Chart 3.2 Collateral policy versus collateral practice, 2005 Survey**  
*Percent of respondents*



### 3.4 COLLATERAL RE-USE

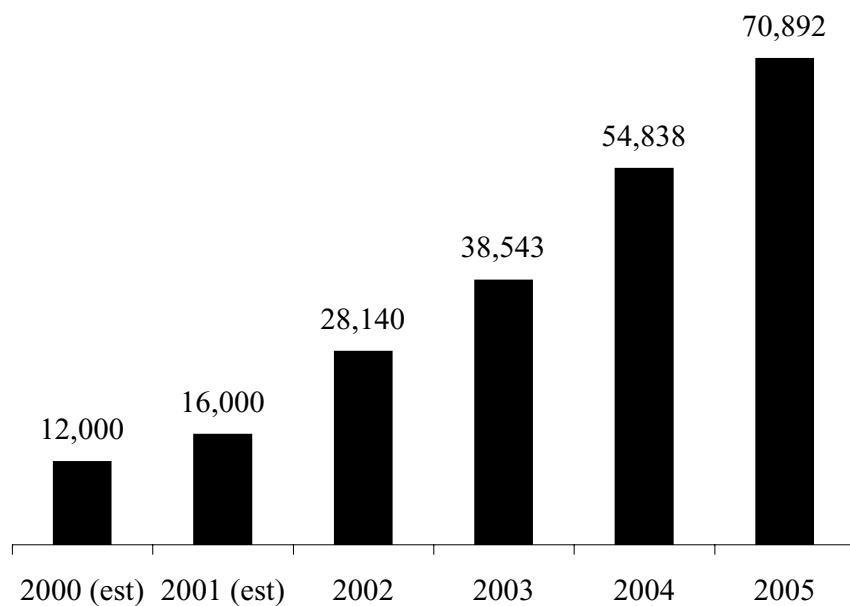
Among large and medium collateral programs, 77 percent report that they re-use collateral. Large programs are far more likely to re-use collateral than the other categories: only one of the 19 large programs does not allow re-use.

## 4. EXTENT OF COLLATERAL USE

### 4.1 NUMBER AND TYPES OF COLLATERAL AGREEMENTS

For the 2005 Survey, respondents report 70,892 collateral agreements in place (Table 4.1), compared with 54,838 in the 2004 Survey. Adjusting for sample growth by restricting the sample to those firms that responded in both years, the growth rate is 31 percent from the last Survey, which is higher than the 26 percent predicted by respondents to the 2004 Survey. This result has been consistent over time: Actual growth has exceeded predicted growth since we began collecting data on predicted growth in 2002. Respondents that provided a forecast expect a growth rate in new agreements of 33 percent in 2005.

**Chart 4.1 Growth of collateral agreements reported by respondents, 2000-2005 Surveys**



The 2005 Survey also collects data on types of agreements used; Table 4.1 shows the relative use of the various agreements, among which ISDA credit support documentation is the dominant choice among practitioners (82 percent). Approximately 65 percent of signed ISDA credit support documentation is bilateral. “Other” documents include, among others, 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. Finally, 29 percent of respondents use the ISDA Collateral Asset Definitions in their ISDA credit support documentation.

**Table 4.1 Numbers and types of collateral agreement used by respondents, 2005 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)	8,889	1,080	27,336	41,494	58.5
1995 ISDA Credit Support Annex English Law (title transfer)	2,892	662	10,045	15,582	22.0
1995 ISDA Credit Support Deed English Law (charge)	35	19	89	145	0.2
1995 ISDA Credit Support Annex Japanese Law	215	3	411	678	1.0
2001 ISDA Margin Provisions German Rahmenvertrag (Besicherungsanhang)	41	1	14	56	0.1
French AFB (Remise en Garantie)	34	41	673	766	1.1
Other	65	407	408	892	1.3
<b>Total number for 2004</b>	<b>3,320</b>	<b>576</b>	<b>1,887</b>	<b>11,279</b>	<b>15.9</b>
	<b>15,491</b>	<b>2,789</b>	<b>40,863</b>	<b>70,892</b>	

**4.2 PERCENT OF DERIVATIVES COLLATERALIZED**

In order to determine the extent of protection afforded by collateral, the 2005 Survey requests data about percentages of trade volume and credit exposure covered by collateral for each product. Percentage 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. Percentage of exposure 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 for 2003, 2004, and 2005.

Overall OTC derivative coverage increased over the past three years, from 30 percent in 2003 to over 55 percent in 2005, in terms of both trade volume and exposure. The highest coverage of both trade volume and exposure is for fixed income products and is similar to that reported in last year's Survey. The biggest increases from 2003, however, occurred in coverage of equity and credit derivatives. Coverage has even increased for foreign exchange trades and exposures, even though it remains low relative to the others because currency exposures tend to be shorter in duration than other underlyings.

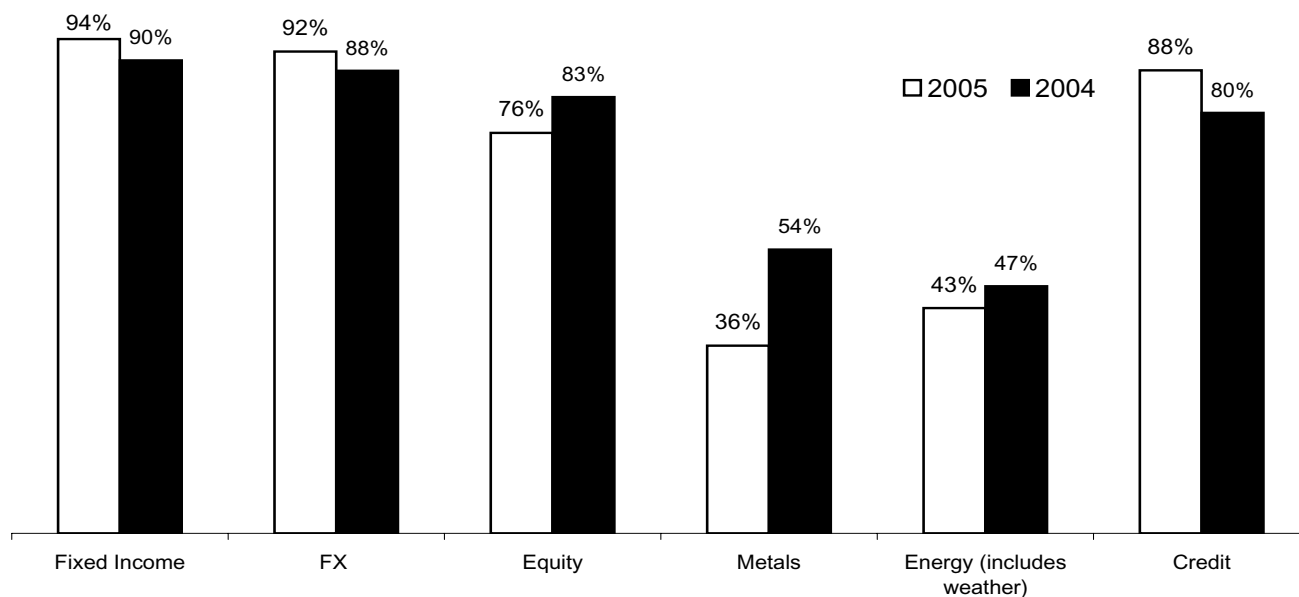
**Table 4.2 Trade volume and exposure collateralized, 2003-05 Surveys***Percents, full sample*

	Percent of Trade Volume			Percent of Exposure		
	2005	2004	2003	2005	2004	2003
<b>OTC Derivatives</b>	<b>56</b>	<b>51</b>	<b>30</b>	<b>55</b>	<b>52</b>	<b>29</b>
Fixed Income	58	58	53	58	55	48
FX	32	24	21	43	37	28
Equity	51	45	27	61	52	24
Metals	31	24	18	44	40	18
Energy	36	26	16	37	30	15
Credit	59	45	30	58	39	25

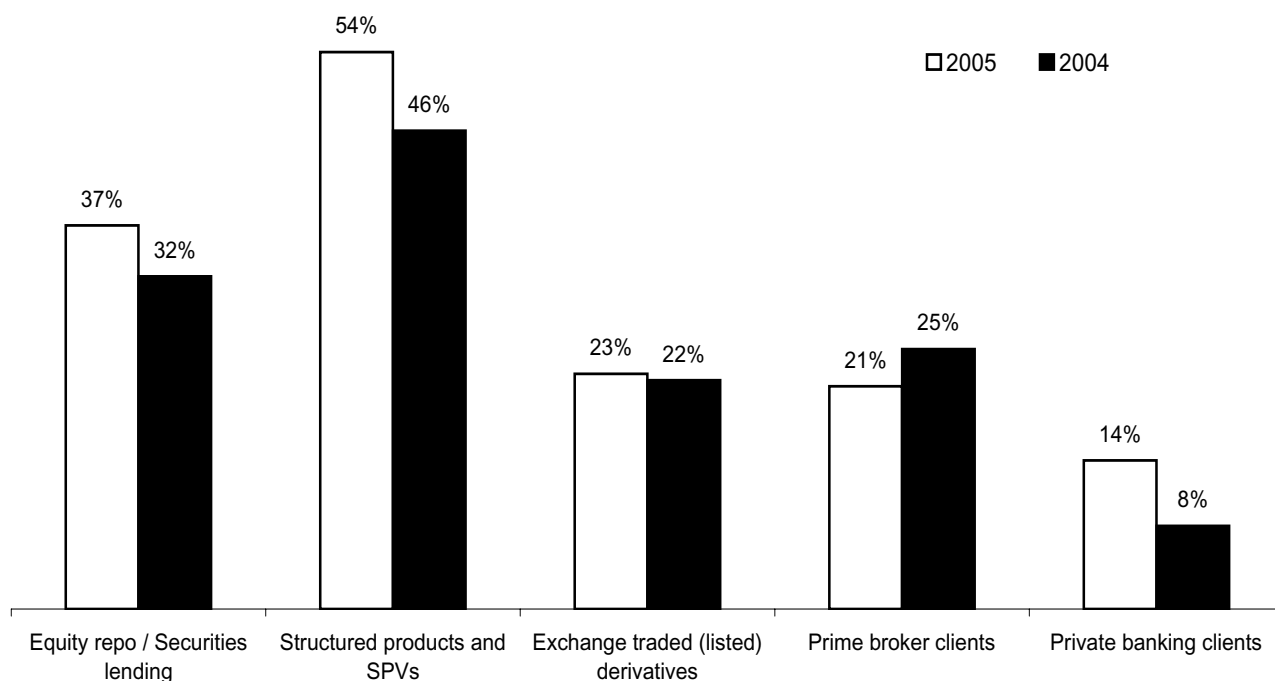
### 4.3 RANGE OF COLLATERALIZED PRODUCTS

As firms increase their use of derivatives, one would expect collateral managers to cover an increasing range of derivative products. Chart 4.2 below shows the range of OTC derivative products supported by collateral management groups; the data are limited to firms responding in both the 2004 and 2005 Surveys. Chart 4.3 shows the extent to which collateralization of traditionally margined products are being managed along with OTC derivatives. Consistent with these expectations, we observed significant increases in most of the categories of traditionally margined instruments.

**Chart 4.2 Percent of OTC derivative products supported by collateral groups , 2003-05 Surveys**



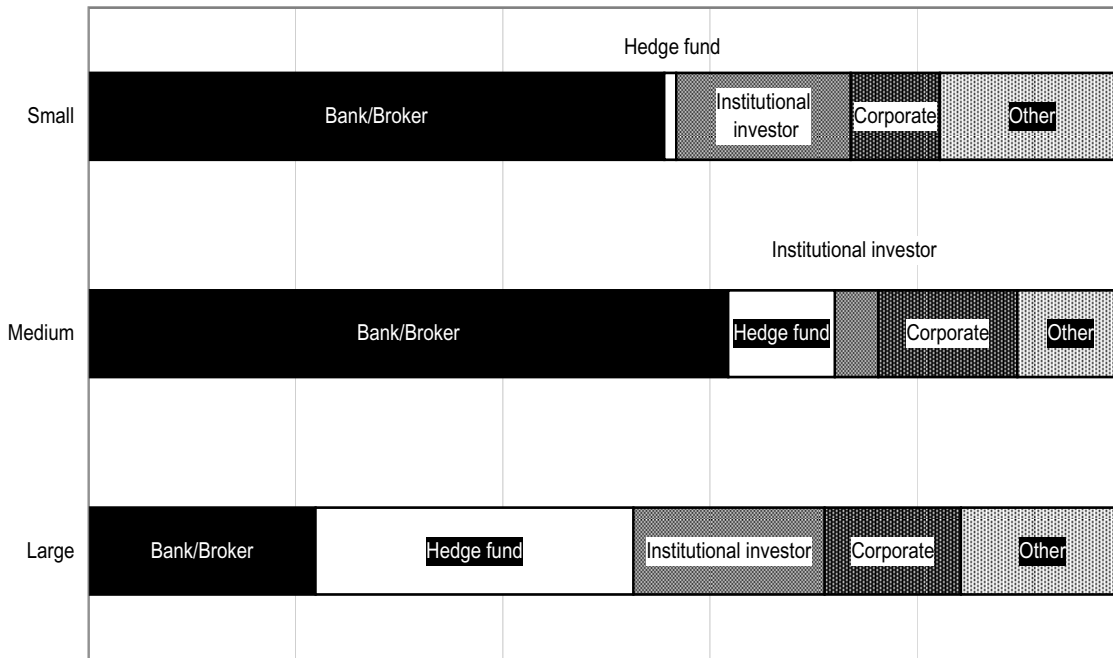
**Chart 4.3 Percent of non-OTC derivative products supported by collateral groups, 2003-05 Surveys**



#### 4.4 COUNTERPARTIES OF COLLATERALIZED TRANSACTIONS

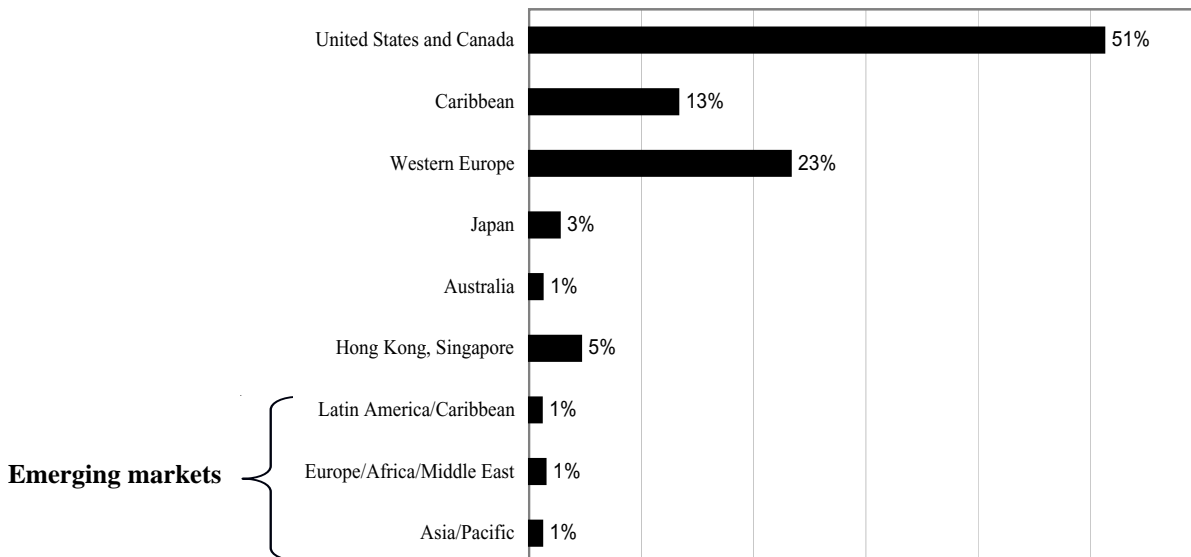
As shown in Chart 4.4, banks (including broker-dealers) and hedge funds remain the largest category of counterparties overall, followed by institutional investors (excluding hedge funds) and corporates. For large collateral programs, hedge funds are the most important category, which was observed for the first time in the 2004 Survey. For other categories, banks remain the major counterparty class. One change from last year’s Survey is the increase in importance of institutional investors and “Other” counterparties to small programs.

**Chart 4.4 Distribution of counterparties by type**



The 2005 Survey also asked respondents for numbers of collateralized counterparties by country of incorporation. As shown in Chart 4.5, over half of respondent counterparties are located in the United States and Canada, followed by Western Europe (23 percent) and the Caribbean (12 percent). All these percentages are virtually the same as those reported in previous Surveys.

**Chart 4.5 Geographical distribution of counterparties**



## APPENDIX 1: 2005 ISDA MARGIN SURVEY PARTICIPANTS

Aareal Bank	Deutsche Postbank	National Bank Of Canada
AB Spintab	Dexia Bank	Nationwide Building Society
Abbey Financial Markets	Dnb Nor Bank	Nationwide Life Limited
ABN Amro	Dresdner Bank	Nikko Citigroup
ABSA Bank	DZ Bank	Nikko Cordial Securities
Agricultural Bank Of China	EFG Eurobank	Nomura Global Financial Products
ANZ Bank	Erste Bank Der Oesterreichischen Sparkassen	Nomura International
Aozora Bank	European Bank For Reconstruction And Development	Nordea Bank
Baden-Württembergische Bank	Export Development Canada	Oesterreichische Volksbanken
Banca Monte Dei Paschi Di Siena	Federal Home Loan Bank Of Seattle	Ontario Teachers Pension Plan Board
Banco Bilbao Vizcaya Argentaria	Freddie Mac	Oversea-Chinese Banking Corporation
Banco BPI	Goldman Sachs	Pacific Life Insurance Company
Banco Santander Central Hispano	Government Debt Management Agency (Hungary)	Queensland Investment Corporation
Bank Austria Creditanstalt	HSBC	Queensland Treasury Corporation
Bank Of America	HSN Nordbank	Royal Bank Of Canada
Bank Of China	IBM	Royal Bank Of Scotland
Bank Of New York	IKB Deutsche Industriebank	RWE Trading
Bank Of Tokyo-Mitsubishi	ING Belgium	Shinko Securities
Bankgesellschaft Berlin	JP Morgan Chase	Shinsei Bank
Barclays Capital	KBC Bank	Societe Generale
Bayerische Hypo- Und Vereinsbank	Keycorp	St.George Bank
Bayerische Landesbank	Kingdom Of Denmark	Standard Chartered Bank
Bear Stearns	Landesbank Baden-Württemberg	Stichting Pensioenfonds
BMO Financial Group	Landesbank Hessen Thüringen - Girozentrale	Sumitomo Trust & Banking
BNP Paribas	Lehman Brothers	Svenska Handelsbanken
Calyon	Lloyds TBS	Taishin International Bank
Canada Mortgage And Housing	Macquarie Bank	TD Bank
Canadian Imperial Bank Of Commerce	Maple Bank	UBS
Chuo Mitsui Trust And Banking Company	Merrill Lynch	UFJ Bank Limited
Citigroup	Mitsubishi Securities	Unibanco
Commerzbank	Mitsubishi Trust and Banking Corporation	Wachovia Bank
Commonwealth Bank Of Australia	Mizuho Corporate Bank	West LB
Credit Suisse First Boston	Mizuho International	Westpac
Daiwa Securities	Mizuho Securities	Zürcher Kantonalbank
Danske Bank	Morgan Stanley	
Deutsche Asset Management	National Australia Bank	
Deutsche Bank		

## 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 nonresponding 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 is of minor significance.

We calculated the adjustment as follows. We first polled a sample of several major dealer respondents and asked for the percentage of collateral received from and delivered to entities that responded to the Survey. We then used the results to calculate an average percentage of collateral received from nonrespondents and an average percentage delivered to nonrespondents. Finally, we adjusted the total amount of collateral held by major dealers with nonrespondents by adding in the collateral with nonrespondents. 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 our final number of \$1.209 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.