
ISDA Margin Survey 2003

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 across 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.

The [ISDA Collateral Committee](#) works to increase the legal certainty and efficiency of collateral use. The Committee works in cooperation with the ISDA Documentation and Risk Management Committees. Collateral Committee activities include the following:

- Drafting and publication of collateral documentation
- Commissioning and distribution to ISDA members of legal opinions from various jurisdictions on the enforceability of collateral documents.
- Preparation and publication of Guidelines for Collateral Practitioners in November 1998 and an update on issues relating to collateral management in the ISDA 1999 Collateral Review
- Continuing study of collateral management in order to improve standards and efficiency

Current Collateral Committee activities include:

- Projects to harmonize legal and regulatory regimes, such as the ISDA European Collateral Law Reform Group and the ISDA Hague Convention Working Group
- A study of enterprise-wide collateral management and the obstacles to its implementation
- Development of a set of collateral asset definitions
- A project on electronic data interchange standards for collateral assets

The Margin Survey Advisory Committee supervises the preparation of the ISDA Margin Survey. The following served as members for the 2003 Survey:

Robert McWilliam, ABN Amro
Bobby Maldonado, Bank of America
Marge Szymczak, Bank of America
James Crabb, Barclays Capital

Julie Graham, JP Morgan Chase
Mark Jennis, Morgan Stanley
Michael Clarke, SunGard
David Maloy, UBS Warburg

Copyright © 2003 by International Swaps and Derivatives Association, Inc.

All rights reserved. Brief excerpts may be reproduced or translated provided the source is stated.

ISDA Margin Survey 2003

TABLE OF CONTENTS

1. INTRODUCTION TO THE ISDA MARGIN SURVEY 2003	1
2. EXECUTIVE SUMMARY	2
3. COLLATERAL ASSETS	3
3.1 VOLUME OF COLLATERAL USED IN MARKET	3
3.2 TYPES OF ASSETS USED AS COLLATERAL	4
3.3 COLLATERAL RE-USE	6
4. EXTENT OF COLLATERAL USE	7
4.1 NUMBER AND TYPES OF COLLATERAL AGREEMENTS	7
4.2 RANGE OF COLLATERALIZED PRODUCTS	7
4.3 PERCENT OF DERIVATIVES COLLATERALIZED	8
4.4 COUNTERPARTIES OF COLLATERALIZED TRANSACTIONS	9
4.5 REASONS FOR USING COLLATERAL	10
5. CHARACTERISTICS OF COLLATERAL PROGRAMS	11
5.1 REPORTING AND ORGANIZATION STRUCTURE	11
5.2 STAFFING	12
5.3 TECHNOLOGY	13
5.4 EXPENSES AND INVESTMENTS	14
APPENDIX 1 – ISDA MARGIN SURVEY 2003 PARTICIPANTS	15
APPENDIX 2 – ISDA MARGIN SURVEY 2003 QUESTIONNAIRE	16
APPENDIX 3 – GLOSSARY OF COLLATERAL BUSINESS TERMINOLOGY	21

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.

Seventy-three firms responded to this year's Survey, compared with 71 in 2002, 43 in 2001, and 46 in 2000. [Appendix 1](#) lists the respondents. Table 1-1 shows characteristics of this year's Survey sample. Of the 73 firms responding, 59 are banks, 11 are securities broker-dealers, 2 are energy firms, and one is an insurance company.

We have divided the programs into three size groups based on the number of collateral agreements maintained by the respondent. Some 55 percent of respondents are based in Europe or South Africa; 21 percent in North America; 16 percent in Japan; and 8 percent in Australia or Asia outside Japan. Although there has been some entry into and exit from the medium and small size classes, all three size classes were relatively stable from last year's Survey. This stability increases the ability to compare results from year to year.

Table 1-1
Profile of firms responding to 2002 ISDA Margin Survey
Numbers of firms

2003 size class	Number of agreements	Responding				Regional mix in 2002 Survey			
		2001	2002	2003	2002-03	Americas	Asia - Pacific	Europe - Africa	Japan
Large	>500	12	14	14	14	9	0	5	0
Medium	51-500	16	25	27	23	6	3	17	1
Small	0-50	15	32	32	22	1	2	18	11
Total		43	71	73	59	16	5	40	12

The Survey consisted of 19 questions, shown in [Appendix 2](#), regarding the respondents' collateral management function as of December 31, 2002. The questions covered three general areas, namely, collateral assets, extent of collateral use, and characteristics of collateral programs. For the first time, the questions in this year's Survey were virtually the same as those asked in the [ISDA Margin Survey 2002](#), thereby making year-to-year comparisons feasible. Response rates differed significantly between questions, however; the following narrative will point out those questions for which low response rates reduce confidence in the Survey results.

Respondents sent the completed questionnaires directly to the consultant. Completed Survey questionnaires were not shared with ISDA staff or member firms; ISDA only received the results in aggregated form.

All amounts are in U.S. dollars. [Appendix 3](#) contains a glossary of collateral business terms.

Ernst & Young served as consultant to this year's Survey, under the supervision of the Margin Survey Advisory Group. ISDA welcomes comments on the Survey and suggestions as to how it could be further improved. Please send comments and suggestions to David Mengle, ISDA Head of Research (dmengle@isda.org).

2. EXECUTIVE SUMMARY

1. ISDA estimates the total amount of collateral in use, adjusting for collateral held by firms that did not respond to the Survey, to be \$719 billion as of the beginning of 2003. Of the total amount, an estimated \$408 billion is collateral received and \$311 billion is collateral delivered.
2. Actual collateral reported by 2003 Margin Survey respondents is \$491 billion, compared with \$289 billion reported in the 2002 Survey. Of the 2003 reported amount, \$267 billion is collateral received and \$224 billion is collateral delivered.
3. Cash is the most commonly used type of collateral at 70 percent of collateral received and 74 percent of collateral delivered; U.S. dollar and euro remain the most commonly used cash assets. Government securities, mostly U.S., are the second most commonly used collateral asset, at 13 percent of collateral received and 19 percent of collateral delivered. Equities have fallen as a percent of collateral received from their 2002 Survey levels.
4. Fifty-five percent of respondents report that they re-use collateral as a matter of policy. Among the large programs, 93 percent (13 out of 14) re-use collateral.
5. Respondents to the 2003 Survey report over 38,500 collateral agreements in place. The number of agreements in place at responding firms has grown 34 percent since the 2002 Survey. This year's respondents forecast further growth of 22 percent during 2003.
6. ISDA documentation, especially the New York Law CSA, remains the dominant form of collateral documentation. In contrast to last year's Survey results, a small number of respondents have adopted the 2001 Margin Provisions.
7. There has been a growth since the 2002 Survey in the percent of programs supporting credit derivatives, fixed income repo, and prime broker clients.
8. Banks and brokers remain the largest category of counterparty for all size classes, and the only significant category for small programs. Institutional investors, hedge funds, and corporates are significant categories for medium and large programs.
9. For fixed income derivatives, respondents report that collateral covers about half of trade volume and 40 percent of exposure. Coverage is lower for other products, both in terms of trade volume and of exposure. The result for small programs suggests that a small number of agreements can have a substantial effect: Specifically, small respondents report that one third of fixed income, equity, and energy derivative exposure is covered by collateral.
10. Credit risk reduction continues to be the most important reason for respondents to use collateral; next in importance is regulatory capital savings. Other factors include access to more complex trades and the ability to price more competitively.
11. Large respondents spent about \$4.8 million for collateral management in 2002, and predict over \$5.0 million for 2003. Medium respondents, in contrast, spent about \$1.0 million in 2002 but forecast slightly less for 2003. Small respondents spent \$335,000 in 2002 and predict \$310,000 for 2003.

3. COLLATERAL ASSETS

3.1 VOLUME OF COLLATERAL USED IN MARKET

The 2003 ISDA Margin Survey estimates the gross amount of collateral in use to be \$719 billion, an increase of 65 percent over the \$437 billion estimated in the 2002 Survey (all results are in U.S. dollars). Of the total \$719 billion, estimated collateral received is \$408 billion and estimated collateral delivered is \$311 billion. The \$719 billion estimate is based on a total reported collateral amount of \$491 billion, (Table 3.1-1), a 70 percent increase over the \$289 billion reported in the 2002 Survey. The adjustment used to obtain the estimated amount is explained below.

Table 3.1-1
Value of collateral received and delivered by respondents
By type, millions of US dollars

	Collateral received		Collateral delivered	
	Amount	Percent	Amount	Percent
Cash				
USD	\$ 124,267	46.6	\$ 115,734	51.6
EUR	41,589	15.6	38,685	17.2
GBP	11,672	4.4	10,183	4.5
JPY	7,571	2.8	1,739	0.8
Other	1,706	0.6	557	0.2
Subtotal	186,805	70.1	166,898	74.4
Government securities				
United States	22,121	8.3	24,184	10.8
European Union	7,443	2.8	15,123	6.7
Japan	4,404	1.7	2,771	1.2
Other	1,736	0.7	728	0.3
Subtotal	35,703	13.4	42,807	19.1
Government Agency securities	11,841	4.4	9,880	4.4
Supranational bonds	126	0.0	41	0.0
Covered bonds (e.g., Pfandbriefe)	802	0.3	1,521	0.7
Corporate bonds	6,332	2.4	941	0.4
Letters of credit	3,618	1.4	296	0.1
Equities	17,562	6.6	1,224	0.5
Metals and commodities	1,318	0.5	162	0.1
Other	2,450	0.9	494	0.2
Subtotal	44,049	16.5	14,559	6.5
Total	266,557		224,263	
Grand total			\$ 490,820	

There are three possible factors behind the significant increase in collateral use. First, mark-to-market values changed during 2002 because of significant changes in interest rates and major currency exchange rates. For example, U.S. dollar interest rate swap rates fell approximately two percentage points and euro swap rates fell one percentage point during 2002; the euro rose about 17 percent against the U.S. dollar during the same period. The market changes were reflected in gross market value changes: The Bank for International Settlement reported a 68 percent increase in gross market values in 2002; 43 percent occurred during the second half alone ([BIS, OTC Derivatives Market Activity in the Second Half of 2002, May 2003](#)). Second, swap activity grew significantly

during 2002. The BIS reported that notionals grew over 27 percent during 2002. Even without changes in market values, one would expect the increased number of swaps to lead to increased use of collateral. Finally, the 2003 Survey results suggest that institutions are collateralizing more of their trades and exposure (Section 4.3).

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 (see Appendix 3). 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 \$719 billion 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.

3.2 TYPES OF ASSETS USED AS COLLATERAL

Table 3.1-1 shows that cash is the most commonly used type of collateral, at 70 percent of collateral received and 74 percent of collateral delivered. Cash has grown in importance since the 2002 Survey, in which cash was 63 percent of collateral received and 65 percent of collateral delivered; U.S. dollar and euro remain the most commonly used cash assets. Government securities, mostly

Chart 3.2-1

Types of collateral accepted and delivered under current policies

Percent of respondents

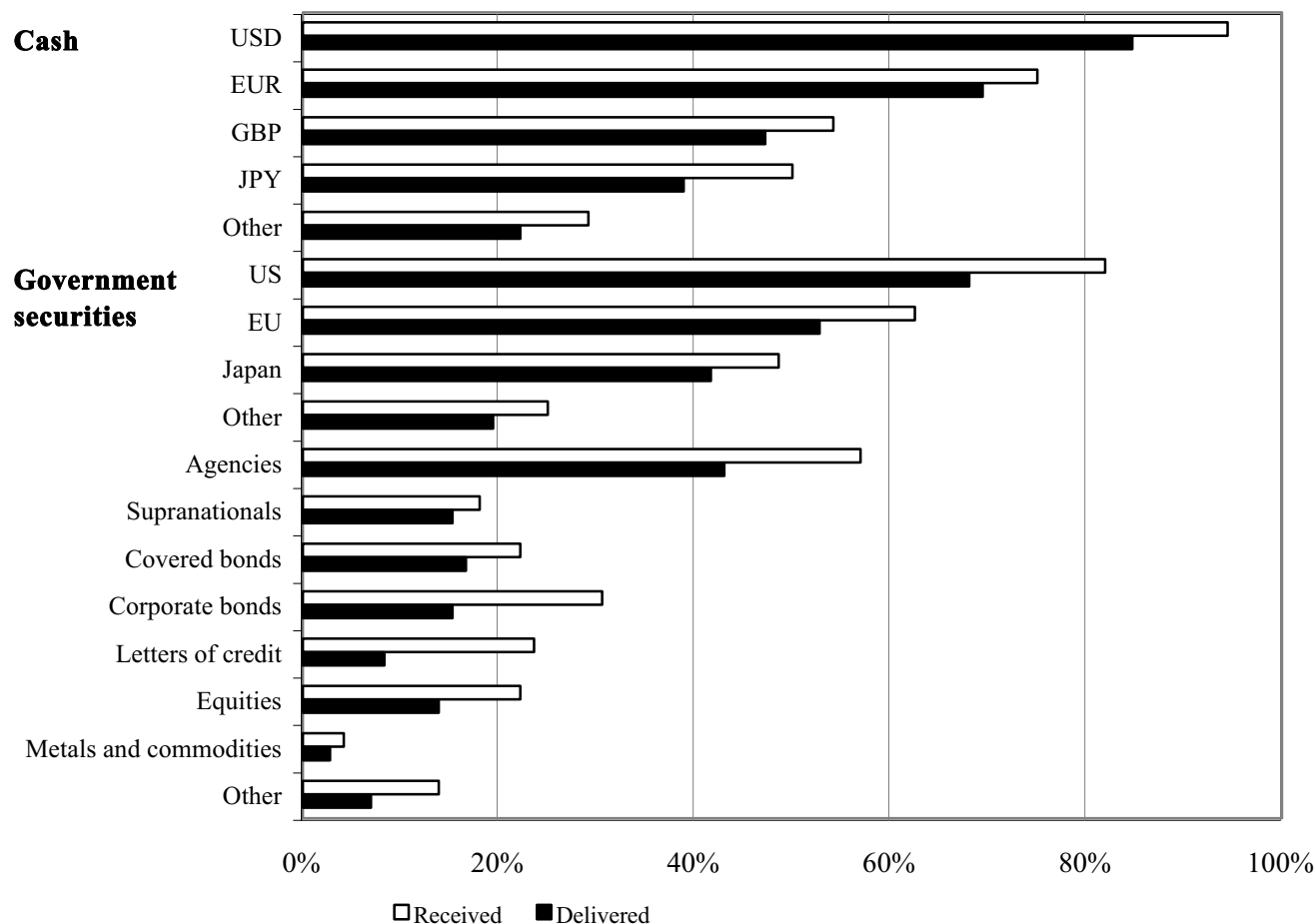


Table 3.2-2

Types of collateral accepted and delivered under current policies

Percents by program size

		Collateral Accepted			Collateral Delivered		
		Small	Medium	Large	Small	Medium	Large
Cash	USD	88	100	100	69	96	100
	EUR	53	88	100	47	81	100
	GBP	31	65	86	19	59	92
	JPY	28	62	79	28	44	54
	Other	19	23	64	13	26	38
Government securities	US	72	88	93	50	74	100
	EU	38	81	86	28	70	77
	Japan	34	54	71	34	44	54
	Other	3	42	43	9	22	38
	Agencies	31	73	86	16	52	92
	Supranational bonds	6	27	29	6	15	38
	Covered bonds	6	35	36	3	22	38
	Corporate bonds	6	38	71	9	11	38
	Letters of credit	6	19	71	3	4	31
	Equities	6	23	57	3	11	46
Metals and commodities	0	0	21	0	0	15	
Other	6	8	43	0	4	31	

U.S., are the second most commonly used collateral asset, at 13 percent of collateral received and 19 percent of collateral delivered. Equities, which are significant only as collateral received, have fallen noticeably since the 2002 Survey, from 11 percent of collateral received to 7 percent; most of this collateral is in large programs.

The preference for cash persists despite policies that allow wider latitude for receipt and delivery. Chart 3.2-1 and Table 3.2-2 show the percent of respondents that allow each category of collateral to be accepted and delivered under current policies. Government securities, for example, are almost as universal in their acceptance as cash, but come nowhere close in actual use. In addition, large programs tend to accept corporate bonds, but do not make much use of them in practice. It appears that, although securities need not have balance sheet implications while cash does, the low cost of delivering cash as well as the lack of market risk are important factors in the choice of collateral asset.

3.3 COLLATERAL RE-USE

Among the Survey respondents, 55 percent report that they re-use (rehypothecate) collateral as a matter of policy. Among large programs, 93 percent (13 of 14) report that they re-use collateral. Respondents report that the most common use of collateral is to meet other collateral calls. A low response rate to more detailed questions on collateral re-use makes it difficult to provide reliable statistics on how firms put collateral received to use.

4. EXTENT OF COLLATERAL USE

4.1 NUMBER AND TYPES OF COLLATERAL AGREEMENTS

For the 2003 Survey, respondents report over 38,500 collateral agreements in place (Table 4.2-1), compared with 28,140 in the 2002 Survey, 16,000 in the 2001 Survey, and 11,000 in the 2000 Survey. In contrast to the results for collateral assets, the Survey does not attempt to adjust number of agreements for nonresponding firms. The reported numbers include the effect of sample growth as well as of some changes in the information requested over time, although the information requested in 2002 and 2003 was the same. Adjusting for these differences by restricting the sample to those firms that responded in both years reveals a growth of 34 percent in agreements, significantly higher than the 19 percent predicted in last year's Survey. Further, respondents that provided a forecast expect a growth rate in new agreements of 22 percent.

The Survey also collected data on types of agreements used; Table 4.2-1 shows the relative use of the various agreements, among which ISDA documentation is the dominant choice among practitioners (82 percent). Further, a small number of respondents have adopted the [2001 ISDA Margin Provisions](#).

Table 4.1-1
Numbers and types of collateral agreement used by respondents

Columns do not necessarily sum to totals

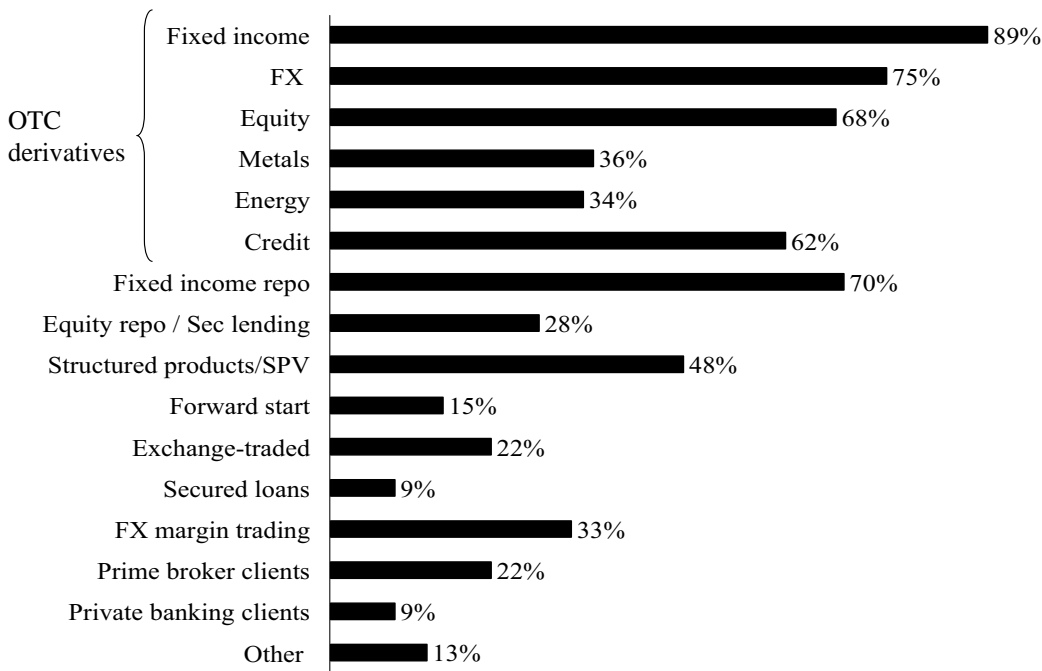
Type of documentation used:	Unilateral in favor	Unilateral against	Bilateral	Total	Percent
1994 ISDA Credit Support Annex New York Law (pledge)	5,368	653	12,578	23,457	60.9
1995 ISDA Credit Support Annex English Law (title transfer)	1,251	248	4,277	7,691	20.0
1995 ISDA Credit Support Deed English Law (charge)	34	7	138	269	0.7
1995 ISDA Credit Support Annex Japanese Law	105		137	263	0.7
2001 ISDA Margin Provisions			37	37	0.1
German Rahmenvertrag	1	12	2,057	2,161	5.6
French AFB	15	50	205	289	0.7
Other	1,871	561	908	4,362	11.3
Total number for 2002	8,645	1,531	20,337	38,543	100.0
Total forecast for 2003				39,293	

4.2 RANGE OF COLLATERALIZED PRODUCTS

The Survey requested information on the types of products, both OTC derivatives and other margined products, supported by a respondent collateral management group. All responding programs support at least one OTC derivative product; Chart 4.2-1 shows more detail on the percent of programs supporting each product. Product support was roughly similar to that reported in the 2002 Survey, although there was significant growth in support for three product categories: Credit derivatives (supported by 62 percent of respondents in 2003 compared with 49 percent in 2002), fixed income repo (70 percent compared with 60 percent), and prime broker clients (22 percent compared with 12 percent).

Chart 4.2-1

Percent of products supported by collateral groups responding to 2002 Survey



4.3 PERCENT OF DERIVATIVES COLLATERALIZED

In order to determine the extent of protection afforded by collateral, the 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 the respondent’s credit exposure metric — potential future exposure, for example — for all counterparties that are collateralized, divided by the sum of the metric for all counterparties, collateralized and uncollateralized. Table 4.3-1 shows the results by program size.

Responses to this question tend to be uneven, especially among smaller programs, which reduces the confidence in the summary statistics. The highest response rates (93 percent) were for percents of fixed income and equity trade volume covered among large programs; mean reported coverage is 57 percent of fixed income trades and 26 percent of equity trades. For coverage of exposure, in contrast, the response rate among large programs for fixed income and equities was about 60

Table 4.3-1
Percent of trade volume and exposure collateralized
Percents, by program size

	Small		Medium		Large		All	
	PTV	PE	PTV	PE	PTV	PE	PTV	PE
Fixed income	59	46	48	45	57	59	54	48
FX	18	20	22	35	24	30	22	29
Equity	38	34	25	14	26	32	28	24
Metals	42	47	5	1	30	49	24	31
Energy	44	NR	7	6	32	46	26	32
Credit	29	32	37	24	36	36	35	29

PTV = Percentage of trade volume PE = Percentage of exposure NR=Not reported

percent; mean reported coverage is 59 percent of fixed income exposure and 32 percent of equity exposure. For small programs, response rates for both trade volume and exposure were 50 percent or lower, although those firms that did respond reported coverage similar to those for larger programs. More important, small firm coverage was significantly higher in 2003 than in 2002 for most products. Small programs in the 2003 Survey report that they cover 59 percent of fixed income trade volume and 46 percent of fixed income exposure, for example, compared with 37 percent of volume and 36 percent of exposure in the 2002 Survey.

Coverage tends to be relatively low for foreign exchange contracts, and is lower in 2003 than in 2002. One possible reason is that currency exposures tend to be shorter in duration than fixed income exposures, which reduces the concern over credit risk.

4.4 COUNTERPARTIES OF COLLATERALIZED TRANSACTIONS

Chart 4.4-1 shows the proportion of agreements with various types of counterparties reported by respondents. Banks are the largest category of counterparty, followed by institutional investors (defined here as insurance companies, pension funds, and money managers), hedge funds, and corporates. But a look at the breakdown for the three size categories shows significant differences in counterparty mix (Table 4.4-3). Banks are the largest counterparty class for all three size classes, and the predominant class for small programs. For large and medium programs, however, institutional investors and hedge funds are important categories. Finally, corporates are a significant category mainly for large programs. Compared with the 2002 Survey results, there have been two main changes. First, for the aggregated sample there has been a decrease in the proportion of banks (from 33 percent to 26 percent), although among small programs banks have increased in significance (from 70 percent to 82 percent). Second, there has been an increase in the proportion of corporates (13 percent to 17 percent), but this change is concentrated among the large programs.

The Survey also asked respondents for numbers of collateralized counterparties by country of incorporation. As shown in Chart 4.4-2, over half of respondent counterparties are located in the United States and Canada, followed by Europe (25 percent) and the Caribbean (10 percent). The relatively high percentage of counterparties in the Caribbean is the result of increased use of collateral among hedge funds. All these percentages are virtually the same as those reported in the 2002 Survey.

Chart 4.4-1
Distribution of counterparties by type

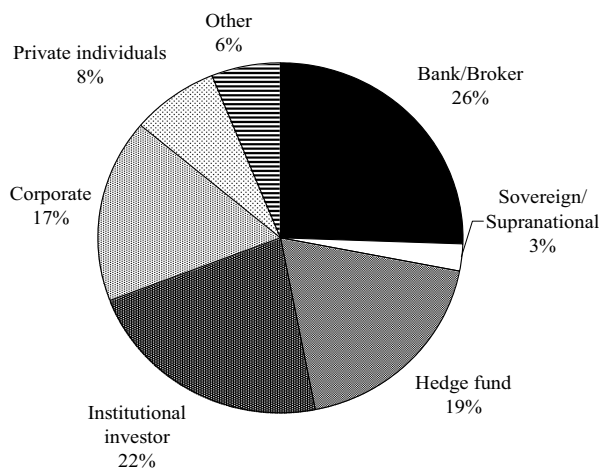


Chart 4.4-2
Geographical distribution of counterparties

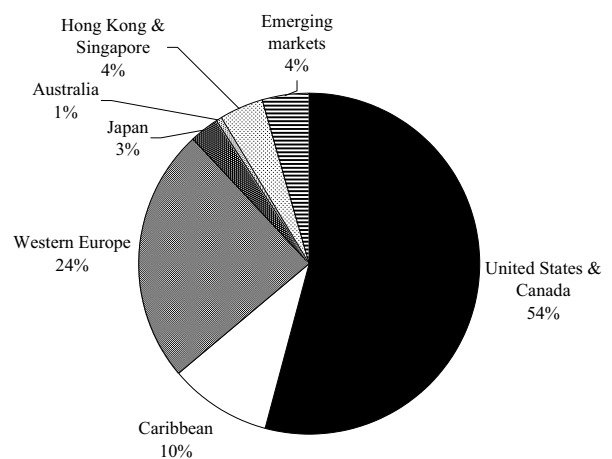


Table 4.4-3
Distribution of counterparties by type
Percents by size class

	Small	Medium	Large	Total
Bank/Broker	81.5	55.1	20.7	25.7
Sovereign/Supranational	2.0	4.1	2.2	2.4
Hedge fund	2.9	13.4	20.1	19.0
Institutional investor	1.2	12.0	23.9	22.2
Corporate	5.6	9.3	18.2	16.9
Private individuals	0.0	0.9	8.7	7.7
Other	6.8	5.2	6.3	6.2

4.5 REASONS FOR USING COLLATERAL

Survey respondents were asked to rank their motivations (drivers) for their using collateral. Not surprisingly, credit risk reduction – meaning reducing losses if default were to occur – took first place as it has since the Survey first polled collateral drivers in 2000; 80 percent of respondents so chose. The most popular choice for second place (31 percent of respondents) was regulatory capital savings. One might expect that, if the New Basel Accord attains its objective of reducing if not eliminating inconsistencies between economic and regulatory capital, the regulatory motivation will fall in importance.

Beyond the first two motivations, it is difficult to distinguish between the importance assigned to the remaining four choices. First, collateral is sometimes *required by the counterparty* in order to allow a transaction to go forward. It is likely that in many cases this is the motivation of the counterparty on the other side of the dealer that decided to collateralize in order to bring about credit risk reduction. Second, *access to more complex or higher risk trades* is a popular choice among relatively large programs. Third, *improved market liquidity* refers to the willingness of derivatives dealers to trade with each other. If dealers can effectively hedge the risks they take on from end-users, the dealers can reduce their risk levels and conduct more end-user business. Collateralizing inter-bank exposures can promote far greater liquidity by reducing the inter-bank credit risk that might otherwise inhibit hedging between dealers. Finally, *increased competitiveness* refers to the use of collateral by firms in order to reduce the charge for credit that many of them factor into derivative spreads. Reduced credit charges directly affect deal pricing and therefore make firms relatively more competitive than they would have been without using collateral.

Because of the minor differences among the last four drivers, one might expect them to shift in importance over time, a result borne out in Table 4.5-1.

Table 4.5-1
Rankings of drivers for collateralization, 2000-2003 Surveys

	2000	2001	2002	2003
Credit risk reductions	1	1	1	1
Regulatory capital savings	3	2	2	2
Required by counterparty	NA	NA	4	3
Access to more complex or higher risk trades	2	4	3	4
Improved market liquidity	5	5	5	5
Increased competitiveness	4	3	6	6

5. CHARACTERISTICS OF COLLATERAL PROGRAMS

5.1 REPORTING LINES AND FUNCTIONS PERFORMED

The Survey asked respondents about primary and secondary reporting lines for the collateral management function; Chart 5.1-1 shows the results. The proportions are virtually identical to those reported in last year's Survey: A strong majority of respondents (63 percent) report primarily to operations, while the most common (39 percent) secondary reporting line is to credit. The Survey also asked about the number of legal entities supported by respondent firms. Virtually all small firms support their own entity and no others, while medium firms tend to support two entities within their firms; the average among large firms is nine. Only seven respondents support an external entity.

Chart 5.1-1
Primary and secondary reporting lines for the margin function

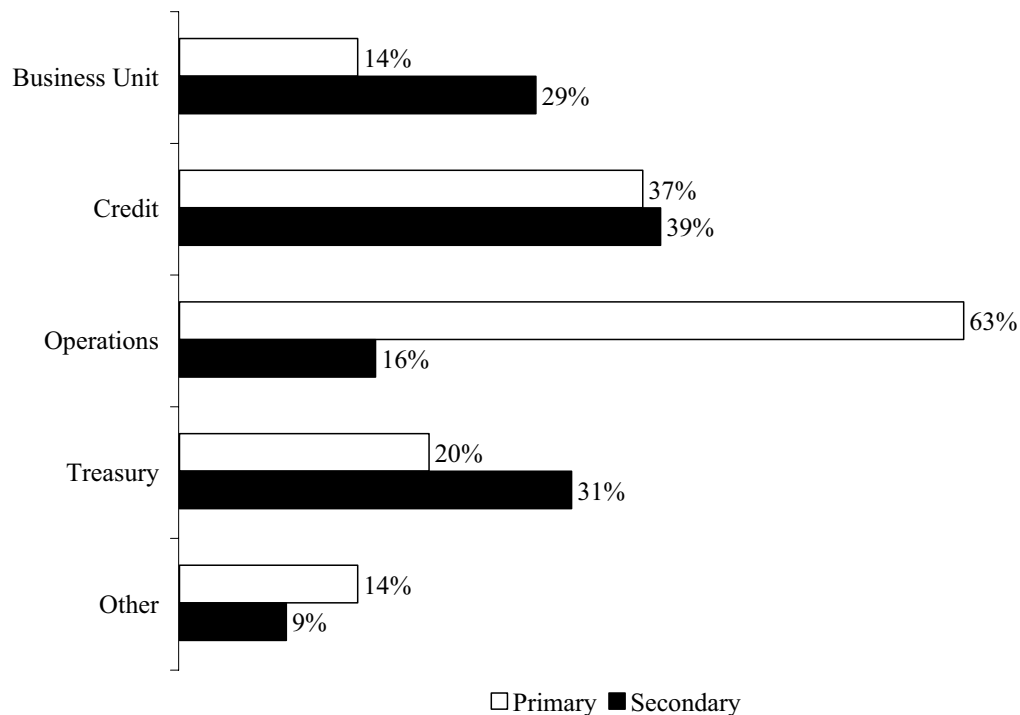


Table 5.1-2 shows the distribution of functions performed by collateral management units. The Survey results show that the division of functions is broadly similar across size groups, with a few exceptions. Large firm collateral groups, for example, tend not to draft collateral agreements, allowing the function instead to be performed by a separate documentation group; further, the proportion of large firms drafting collateral agreements has fallen noticeably since the 2002 Survey. Other changes from 2002 include a fall in the proportion of medium and large programs providing credit exposure reports.

Table 5.1-2
Functions performed by collateral management team
Percent of respondents, by size class

	All firms	Small	Medium	Large
Data management – checking, cleansing, analysing underlying data.	77	69	81	86
Drafting collateral agreements.	45	59	44	14
Setting up new agreements in the collateral management system.	77	75	81	71
Calculating and reviewing the calculations of collateral calls.	97	100	93	100
Calling counterparties to make collateral calls.	97	97	96	100
Settling collateral calls.	67	59	70	79
Managing reconciliations and disputes for collateralized portfolios.	96	94	100	93
Providing management reporting on the collateralized portfolio.	90	91	89	93
Credit exposure reporting.	58	72	48	43
Providing valuation statements to counterparty.	89	91	89	86
Writing collateral policy.	51	38	59	64
Other	21	9	33	21

5.2 STAFFING

The Survey asked respondents to indicate the total full-time equivalent (FTE) resources supporting collateral management by function. The results are shown in Chart 5.2-1. The three largest function categories over the entire sample were margining (34 percent of FTE resources) management (19 percent), and documentation (15 percent). Collateral function sizes overall are shown in Table 5.2-2, which shows a wide variation in group sizes, although the closeness of the average and median for each group suggests that the average size for each group is reasonably representative.

The Survey asked respondents to describe their staffing forecasts for 2003; averaged responses appear in Table 5.4-1 on page 14 by size.

Chart 5.2-1
Full-time equivalent resources supporting collateral management
Percent of total resources, by function

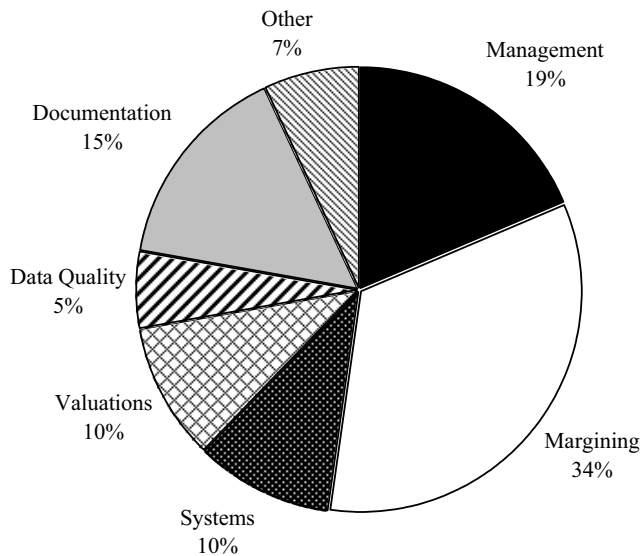


Table 5.2-2
Collateral function size distributions, full-time equivalent units

	Small	Medium	Large
Average	7	10	37
Median	4	6	36
High	19	34	92
Low	1	1	2

5.3 TECHNOLOGY

Table 5.3-1 shows the classes of technology platforms according to size class. The Survey classifies technology solutions for collateral management into the following categories:

- *Spreadsheets* are designed to produce a collateral call statement with limited computation embedded in the model. They may also include separate models for tracking collateral asset inventory and rehypothecation. Spreadsheets are the most common solution among the smaller respondents.
- *Tactical databases* are typically built in Microsoft Access or a tool with a similar level of sophistication. They are normally used to replace or extend spreadsheet type functionality in a slightly more robust technical environment and to permit better cross-counterparty analysis and reporting. Tactical databases tend to be found in firms that are moving from a spreadsheet environment to an in-house system.
- *In-house systems*, also known as *bespoke* systems, may be constructed in a wide variety of technologies. They are normally large, custom-designed collateral systems with rich functionality and a strong control environment. All large programs rely on bespoke systems.
- *Vendor systems*. Several vendors offer collateral management systems. The technology set used varies considerably. Functionality is rich, and in some cases has been developed to meet the sophisticated needs of a number of banks over time. Vendor systems tend to be the most common choice among medium programs.

The results in Table 5.3-1 show that, although each size class has a preferred solution, there are no corner solutions. All programs employ a mix of platforms.

Table 5.3-1
Technology platforms by size class
Percent of respondents

	Small	Medium	Large
Spreadsheets	53	42	7
Tactical databases	34	27	7
In-house system	38	54	93
Installed vendor package	28	35	29

5.4 EXPENSES AND INVESTMENTS

The Survey asked respondents about their projected expenses and investments on the collateral function and on technology in particular (see Questions 13 and 15 in Appendix 3); the results are shown in Table 5.4-1. Comparisons of expenditure and investment data should be interpreted with care because different firms measure expenses in different ways. One firm might claim to spend \$100 on collateral management technology, for example, but could be referring to the investment in a central collateral system while ignoring technology investments made in various different businesses that need to extract and feed derivative position values to the central system. Other firms, by contrast, might collect the entire cost centrally. Other issues arise in the classification of technology versus non-technology expense. It is not always clear, for example, whether a person working on a technology implementation project should be counted as a technology expense. Differences between how firms address these issues makes interpretation of the data difficult.

Table 5.4-1
Staff, technology and expenditure forecasts for 2003
Averages by size class

		Small	Medium	Large
Staff (FTE)	Supporting core collateral activities	3.3	7.1	29.6
	Working on technology projects/electronic investments	1.1	1.5	3.3
	Headcount average cost per person (US\$ equivalent)	69,643	79,878	109,586
Technology (US\$ equivalent)		27,501	109,000	241,304
Expenditures for collateral management (US\$ equivalent)				
	Current 2002	334,786	1,049,286	4,784,651
	Forecast 2003	309,643	983,153	5,030,463

APPENDIX 1: 2003 ISDA MARGIN SURVEY PARTICIPANTS

Abbey National Financial Products	HSBC
ABN AMRO	ING Bank
ABSA Bank	Investec Bank
AIG Financial	J.P. Morgan Chase
Aozora Bank	KBC Bank
Baden-Wuerttembergische Bank	Landesbank Baden-Wuerttemberg
Banco Bilbao Vizcaya Argentaria	Lehman Brothers
Banco Portugues de Investimento	Lloyds TSB Bank
Bank Austria	Merrill Lynch.
Bank Brussels Lambert	Mitsubishi Trust and Banking
Bank of America	Mizuho Corporate Bank
Bank of China	Morgan Stanley
Bank of New York	National Australia Bank
Bank of Tokyo-Mitsubishi	National Bank of Canada
Bankgesellschaft Berlin	Nikko Cordial Securities
Barclays	Nomura Global Financial Products
Bayerische Hypo-und Vereinsbank	Nomura International
Bayerische Landesbank Girozentrale	Nordea Bank Finland
Bear Stearns	PSEG Energy Resources & Trade
BNP Paribas	Rabobank Nederland
Caboto IntesaBci	Royal Bank of Canada
Chu Mitsui Trust & Banking	Royal Bank of Scotland
CIBC World Markets	RWE Trading
Citigroup	Santander Central Hispano
Commerzbank	Shinsei Bank
Commonwealth Bank of Australia	Societe Generale
Credit Lyonnais	Standard Chartered Bank
Credit Suisse First Boston	Sumitomo Mitsui Banking Corporation
Daiwa Securities SMBC	Sumitomo Trust and Banking
Danske Bank	SunTrust Robinson Humphrey
Deutsche Bank	Svenska Handelsbanken
Dexia Bank Belgium	UBS
Dresdner Bank	UFJ Bank
DZ Bank	Westdeutsche Landesbank Girozentrale
EFG Eurobank	Westpac Banking Corporation
Goldman Sachs.	Zurcher Kantonalbank
HBOS	

APPENDIX 2: 2002 ISDA MARGIN SURVEY QUESTIONNAIRE

ISDA

International Swaps and Derivatives Association, Inc.

ISDA Margin Survey 2003

Please e-mail completed Survey by January 31, 2003, to isda@ey.com

Confidentiality of data: All individual responses will be submitted directly to the consultant and will not be shared with ISDA staff except in aggregated form. The consultant will treat individual responses as confidential and will not divulge an individual survey respondent's data to anyone other than an appropriate resource from the same organization as the respondent.

ISDA Contact: David Mengle, dmengle@isda.org or 1-212-901-6017
Consultant contact: John Walsh, john.walsh@ey.com or 1-212-773-1440



Section I. Reference Information

1. What is the name of your company?
2. What is your name?
3. What is the date of completion of this survey? Please note that the survey is to cover the calendar year ended December 31, 2002.

Section II. Organization and Extent of Collateral Use

4. Please indicate primary and secondary reporting lines for the margin function in your organization. Tick as many boxes as appropriate and add additional explanation if helpful.

	Primary	Secondary
Business Unit	<input type="checkbox"/>	<input type="checkbox"/>
Credit	<input type="checkbox"/>	<input type="checkbox"/>
Operations	<input type="checkbox"/>	<input type="checkbox"/>
Treasury	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify in text box)	<input type="checkbox"/>	<input type="checkbox"/>

5. Which of the following functions does your collateral management team perform? Please check all that apply.

- Data management – checking, cleansing, analyzing underlying data.
- Drafting collateral agreements.
- Setting up new agreements in the collateral management system.
- Calculating and reviewing the calculations of collateral calls.
- Calling counterparties to make collateral calls.
- Settling collateral calls.
- Managing reconciliations and disputes for collateralized portfolios.
- Providing management reporting on the collateralized portfolio.
- Credit exposure reporting.
- Providing valuation statements to counterparty.
- Writing collateral policy.
- Other (please specify):

6. Which OTC derivatives products does your function support? Check all that apply. * See Explanatory Notes for how to determine "Percent of Trade Volume" and "Percent of Exposure."

	Tick if supported	Percent of Trade Volume*	Percent of Exposure*
Fixed Income	<input type="checkbox"/>	[%]	[%]
FX	<input type="checkbox"/>	[%]	[%]
Equity	<input type="checkbox"/>	[%]	[%]
Metals	<input type="checkbox"/>	[%]	[%]
Energy	<input type="checkbox"/>	[%]	[%]
Credit	<input type="checkbox"/>	[%]	[%]

7. What other margined products does your function support? Check all that apply.

	Tick if supported	Percent of Trade Volume*	Percent of Exposure*
Fixed Income Repo	<input type="checkbox"/>	[%]	[%]
Equity Repo / Securities Lending	<input type="checkbox"/>	[%]	[%]
Structured Products and SPVs	<input type="checkbox"/>	[%]	[%]
Forward Start, when issued, when traded business	<input type="checkbox"/>	[%]	[%]
Exchange Traded (listed) Derivatives	<input type="checkbox"/>	[%]	[%]
Secured Loans	<input type="checkbox"/>	[%]	[%]
FX Margin Trading	<input type="checkbox"/>	[%]	[%]
Prime Broker Clients	<input type="checkbox"/>	[%]	[%]
Private Banking Clients	<input type="checkbox"/>	[%]	[%]
Other (please specify) [text]	<input type="checkbox"/>	[%]	[%]

8. How many OTC derivative collateral agreements does your firm manage?

Please indicate the actuals as of December 31, 2002.

Type of documentation used:	Unilateral in your Favor	Unilateral against you	Bilateral	Total
1994 ISDA Credit Support Annex New York Law (pledge)	[number]	[number]	[number]	[number]
1995 ISDA Credit Support Annex English Law (title transfer)	[number]	[number]	[number]	[number]
1995 ISDA Credit Support Deed English Law (charge)	[number]	[number]	[number]	[number]
1995 ISDA Credit Support Annex Japanese Law	[number]	[number]	[number]	[number]
2001 ISDA Margin Provisions	[number]	[number]	[number]	[number]
German Rahmenvertrag	[number]	[number]	[number]	[number]
French AFB	[number]	[number]	[number]	[number]
Other (please specify) [text]	[number]	[number]	[number]	[number]
Total number for 2002				0
Total forecast for 2003				[number]

9. Please indicate your total number of collateralized counterparties by type:

Bank/Broker	[number]
Sovereign/Supranational	[number]
Hedge fund	[number]
Institutional investor (Insurance/pension/money manager)	[number]
Corporate	[number]
Private individuals	[number]
Other - please specify [text]	[number]

10. Please indicate your total number of collateralized counterparties by country of incorporation:

United States and Canada	[number]
Caribbean	[number]
Western Europe	[number]
Japan	[number]
Australia	[number]
Hong Kong, Singapore	[number]
Emerging Markets	0
<i>of which</i> Latin America/Caribbean	[number]
Europe/Africa/Middle East	[number]
Asia/Pacific	[number]

11. How many legal entities does your collateral management unit support?

Entities owned or controlled by your firm	[number]
External entities not controlled by you	[number]

Section III. Drivers for Collateral Management

12. What are the main drivers for collateral management at your firm? Please rank in order of importance with 1 being most important and 7 being least important.

	Rank 1 to 7	
Regulatory capital savings	[number]	
Credit risk reductions	[number]	
Improved market liquidity	[number]	
Access to more complex or higher risk trades	[number]	
Increased competitiveness, i.e., the ability to quote lower prices	[number]	
Required by counterparty	[number]	
Other	[number]	[text]

Section IV. Resourcing

13. Please indicate your 2002 actual and planned 2003 expenditure (US\$ equivalent) for collateral management:

Current 2002	[number]
Forecast 2003	[number]

14. Please indicate the total full time equivalent resources supporting collateral management by function (all locations):

Management	[number]	
Margining	[number]	
Systems	[number]	
Valuations	[number]	
Data Quality	[number]	
Documentation	[number]	
Other	[number]	[text]
Total	0	

15. Please indicate your 2003 forecasts for:

Staff	Supporting core collateral activities	[number]
	Working on technology projects/electronic investments	[number]
	Headcount average cost per person (US\$ equivalent)	[number]
Technology		[number]

16. Please indicate the total full time equivalent resources supporting collateral management by location. The total should agree with the total in N 14 (above).

Americas			0
	New York metro area	[number]	
	Other North America	[number]	
	Latin America	[number]	
Europe			0
	London or other UK	[number]	
	Paris	[number]	
	Frankfurt	[number]	
	Other Europe	[number]	
Asia/Pacific			0
	Tokyo	[number]	
	Hong Kong	[number]	
	Singapore	[number]	
	Sydney	[number]	
	Other Asia/Pacific	[number]	
Total			0

Section V. Technology

17. What is the major technology platform on which you operate your collateral management activity? If you have several collateral platforms that would consider "major", please tick as many boxes as necessary. If you use a platform within your collateral process but its role is minor, you ignore it for this question.

- Spreadsheets
- Tactical databases e.g., MS Access
- In-house built system
- Installed vendor package

Section VI. Collateral Treasury

18. Please indicate what assets you accept and deliver as collateral according to your firm's policies, and what assets were actually in practice accepted/delivered as of the survey date. Please quote values in US\$ equivalents, using the exchange rates shown in the Explanatory Notes. For items marked with "", please refer to the Explanatory Notes.**

		Collateral Received		Collateral Delivered	
		Accepted per current collateral policy?	US\$ equivalent of collateral holdings at 31 Dec 2002	Delivered per current collateral policy?	US\$ equivalent of collateral delivered at 31 Dec 2002
Cash	USD	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]
	EUR	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]
	GBP	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]
	JPY	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]
	Other (please specify) [text]	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]
Government securities	United States	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]
	European Union	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]
	Japan	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]
	Other (please specify) [text]	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]
Government Agency securities*	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]	
Supranational bonds*	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]	
Covered bonds (e.g., Pfandbriefe and similar)*	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]	
Corporate bonds	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]	
Letters of credit	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]	
Equities	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]	
Metals and commodities	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]	
Other (please specify) [text]	<input type="checkbox"/>	[number]	<input type="checkbox"/>	[number]	

19. Collateral Re-Use

Please tick the box if as a matter of policy your firm does not rehypothecate

If your firm does rehypothecate, what percentage of collateral received is:

Legally blocked	[%]
Allowed	0%
<i>of which</i>	
Used to meet calls	[%]
Repo	[%]
Put into custody*	[%]
Other (please specify)	[%] [text]

APPENDIX 3: GLOSSARY OF COLLATERAL BUSINESS TERMINOLOGY

Agreement. An arrangement between any two parties to post collateral to cover credit exposure. A collateral agreement can be *one-way* — in which only one of the parties can be required by the other to post collateral — or *bilateral* — in which collateral can be required by either party. Agreements are said to be *active* once one or more transactions have been included in their scope. The aggregate of a firm's agreements constitutes a collateral *program*. In some instances, the collateral arrangement is managed by a third party, in which case the agreement is termed *tripartite*.

Collateral. The generic term for property provided by one party to another to mitigate the transferee's credit risk on the transferor; also known as *margin*. The term 'collateral' derives from 'collateral security' (as opposed to the principal security, which at one time would typically have been land and buildings). The term can be used to refer to security interest (see *pledge*) or title transfer arrangements.

Collateral Asset Definitions. A consolidated document identifying in detail the different types of collateral that may be exchanged between market participants. The objective of the ISDA Collateral Asset Definitions Project is to standardize the descriptions for the most commonly used collateral assets and thereby reduce certain operational and legal risks in the use of collateral. The Project also seeks to provide a more streamlined method by which collateral assets may be included in collateral arrangements.

Collateral Law Reform. An ISDA effort to improve and monitor collateral legislation affecting cross-border securities transactions. The [Collateral Law Reform Group](#) seeks to address problems of which law applies as well as of how a security interest is created in a cross-border environment.

Credit exposure. The amount that would be at risk of loss in a transaction if the counterparty were to default.

Credit risk. Uncertainty regarding a counterparty's willingness or ability to fulfil its contractual obligations.

Credit risk mitigation. Any of a number of ways of systematically limiting the potential for loss due to credit risk. Collateral is a key form of credit risk mitigation, as are credit derivatives, guaranties, and netting. See also *potential future credit exposure*, and *risk – correlation risk*.

Credit support. The term used in ISDA documentation for all forms of collateralization.

Credit Support Annex/Credit support documentation. Legal documents setting out terms of a collateral arrangement between two parties. The documents are designed to facilitate the establishment and maintenance of collateral agreements between parties in a legally robust and predictable manner. ISDA publishes five such forms of documentation. These are the New York Law Pledge Annex, the English Law Transfer Annex, the English Law Credit Support Deed, the Japanese Law Annex, and the 2001 Margin Provisions. These are supported by annually updated reasoned legal opinions as to the enforceability of contracts relying on such documents in different jurisdictions around the world. Credit support documentation outside ISDA includes the *Rahmenvertrag* in Germany and the AFB in France.

Custodian. A third party appointed to hold in custody assets on behalf of account-holders, whose rights to those assets will be shown by entries in a register or similar set of records (typically in computerized form).

Database. A large collection of data in a computer, organized to be readily expanded, updated, or retrieved. Collateral operations require particular forms of data to support them, notably in relation to eligible and posted assets, underlying exposures, and the details of any agreements. The simplest form of database is a spreadsheet. If the volume or complexity of the data is greater but the database is to be used only by a specific business unit, a *tactical database* is a more structured and readily manageable alternative. Finally, a *data warehouse* is a central and widely accessible repository of data, often taken from a variety of sources.

Data warehouse. A repository of potentially useful information, structured in such a way as to make that information accessible to all concerned parts of a firm. It may, in addition, allow the development and maintenance of a historic time series, which may constitute part of that same database or else be stored separately. A key advantage of a data warehouse is that it can (1) assemble data from disparate sources on a variety of issues that have been converted into a common format, and (2) store the data for use throughout a firm's various systems.

Electronic Data Interchange (EDI). A task to define a standard minimum set of data for the exchange of collateral trade information between parties for reconciliation purposes. The [ISDA EDI Collateral Working Group](#) seeks to encourage more regular reconciliation among counterparties.

Enterprise collateral management. The optimal management of credit, collateral, capital and all related execution, pricing, operational, documentation, and risk management aspects of a portfolio across all products, all business units and all locations.

Hague Convention. The [Hague Convention on Securities Held with an Intermediary](#) is an international agreement that seeks to increase legal certainty in cross-border securities transactions by clarifying which jurisdiction's law applies. The approach adopted by the Hague Convention is to look to the law of the location of the intermediary maintaining the account to which the securities are credited. This approach replaces the *lex rei sitae* principle, which looks to the law of the place where the securities are located.

Haircut. Any collateral that is eligible for posting is, as a result of market movements, liable to decrease in value relative to the exposure it is intended to secure. To counter this, dealers will typically assign less than full face value to that collateral. The amount by which the value assigned to the collateral is less than full face value is termed the *haircut*, usually expressed in percentage terms of the face value.

ISDA instruments. Privately negotiated derivatives — including interest rate swaps and options and derivatives referenced to credit, equity and commodity prices, and foreign exchange rates — covered by ISDA documentation. A particular collateral arrangement may cover exposures arising from any or all of these and other financial transactions.

Liquidity. Strictly, funding or the ability to source funding; the ability or willingness to post collateral can help secure access to funding. In the context of the current survey, the term denotes access to financial transactions more broadly.

Margin. A synonym for *collateral*. Particular usages include the terms: *initial margin*, which is collateral required to be posted at the inception of a transaction or relationship; *variation* (top-up) margin is additional collateral provided by one party to the other as a result of changes in the *mark-to-market* value of the exposure or of the collateral; *margin call*, the process by which a party demands initial or further collateral, usually upon the passing of a credit *threshold*; and *cross-margining*, referring to the joint collateralization of several exposures or classes of exposure. Margin also commonly refers to collateral required by an exchange clearing house.

Margin provisions. See *Credit Support Agreement*.

Mark-to-market. The process of valuing an exposure (arising from future obligations) based on current market prices.

Market stress. A period when asset values are suddenly and significantly depressed or otherwise dislocated. In such a period, the benefits of effective collateral arrangements become increasingly important.

Operational risk. Any of a series of risks (including legal risk) that can reduce the effectiveness of a collateral arrangement. ISDA defines operational risk as ‘the risk of direct or indirect loss resulting from inadequate or failed internal process, people and systems or from external events.’

Pledge. A form of security interest granted by a party (the *pledgor*) over its property to another party (the *pledgee*). See also *title transfer, collateral, and rehypothecation*.

Potential future (credit) exposure. Once an exposure has been marked to market, it could increase in value in the future. At the same time, many collateral agreements are based on periodic transfers of security. Collateralization therefore often takes into account both the current exposure and the potential for that exposure to increase between mark-to-market or transfer dates.

Program. See *agreement*.

Rehypothecation (re-use). Strictly, the use of pledged assets by the pledgee to give as security for the pledgee’s own obligations, these being subject to the original pledgor’s rights to return of the property. It is sometimes used less precisely to mean pledged assets used by the pledgee as if it owned those assets, for example, sale of the pledged assets by the pledgee to a third party. Still less precisely, it is used to mean re-use, that is, resale by the recipient of collateral under a *title transfer* arrangement.

Repo (repurchase agreement). A transaction in which one party sells securities to the other at the outset and the parties agree that the other will sell securities of the same type at the same price back to the other party at a specified date in the future. When the party selling the securities at the outset chooses which securities these should be, the transaction is a *repo* or *securities repurchase* transaction and has the commercial effect of a secured loan; where the party buying the securities at the outset chooses which securities these should be, the transaction is a *securities lending* transaction and allows the buyer to cover a short position in those securities.

Re-use. See *rehypothecation*.

Threshold. A specified level of credit exposure, beyond which collateral must be posted. In the interests of operational efficiency, agreements may stipulate a *de minimis* level of collateral required to be posted at any given point. This would be relevant when there has been only a small increase in the underlying credit exposure. This minimum transferable amount is known as the *threshold amount*.

Title transfer. A form of collateral arrangement where absolute title to the underlying assets is transferred in exchange for a promise to return equivalent (fungible) assets, subject to a right of set-off; also referred to as *outright transfer*.

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 across 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.

North American Office

360 Madison Avenue, 16th Floor
New York, NY 10017
Telephone: +1 212 901 6000
Facsimile: +1 212 901 6001

European Office

One New Change
London EC4M 9QQ
Telephone: +44 (0)20 7330 3550
Facsimile: +44 (0)20 7330 3555

Japanese Office

Chuo Building, 1st Floor
2-17 Kagurazaka
Shinjuku-ku
Tokyo 162-0825
Telephone: +81 3 5227 3282
Facsimile: +81 3 5227 3283

Asia Pacific Office

24 Raffles Place
#22-00 Clifford Centre
Singapore 048621
Telephone: +65 6538 3879
Facsimile: +65 6538 6942

Website: www.isda.org

E-mail: isda@isda.org