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Beneficial Owners Guide 2020

SURVEY

THE BUY-SIDE RATE THE PERFORMANCE OF THEIR CUSTODIAL AND THIRD-PARTY AGENT LENDERS

+ ROUNDTABLE

Perspectives on US securities lending trends, challenges, and opportunities

Teamwork and dedication are essential to the success of any organization. They are hallmarks of how we work with our securities lending clients and the standard by which our clients judge us.

We understand that by serving our clients well, our own success will follow. To learn more about the capabilities, please contact Chris Bodner (617-204-2412) / Christel Carroll (617-204-2476) / Michael Furnival (+44-20-7774-8762) / Ryan Watt (+44-20-7051-8514).

Goldman Sachs

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J.P. Morgan wins unweighted, while State Street takes top spot in the weighted class

J.P. Morgan achieved the highest unweighted global average in this year's survey, while State Street came out on top on a weighted basis.

The annual Global Investor/ISF Beneficial Owners Survey asks beneficial owners from around the world to rate the performance of their custodial lenders and third-party agent lenders across a number of service categories. This includes areas such as collateral management, market coverage, reporting transparency, and programme customisation.

The results are broken down by region and lender type. They are also presented as weighted and unweighted results, where weighted figures are adjusted according to the size of respondents' lendable portfolios and the importance they place on particular service areas.

This year's survey received 113 responses from a range of lenders across Asia Pacific, the Americas, Europe, the Middle East and Africa (EMEA), including pension funds, insurance companies, sovereign wealth funds, central banks, asset managers and mutual funds.

J.P. Morgan received the highest average score in the survey with an average unweighted score of 6.69 out of 7, up from 6.29 in 2019. It is followed by Goldman Sachs Agency Lending with 6.59. In the weighted overall tables, State Street held on to the highest average ranking in 2020 for a third consecutive year, with particularly strong results in the Americas.

RESPONDENTS:

Asset managers and mutual funds made up 68% of this year's respondents, pension funds accounted for 14% and insurance companies for 8%, while sovereign wealth funds, central banks and corporations represented the remaining responses upon which the 2020 results are based.

Approximately 57% of this year's respondents have assets under management (AuM) of more than $100 billion.

Just over one fifth (21%) of respondents report that the total value of their portfolio that is available to be lent out exceeds $100 billion. Under one in 10 (9%) respondents can lend out up to $1 billion, 54% can lend $1-50 billion, and 16% can lend $50-100 billion.

For 41% of respondents, the approximate value of assets out on loan at any given point in time typically totals under $1 billion, and for 19% of respondents the typical total is $1-2 billion. Only 4% of respondents tend to have more than $50 billion of assets out on loan at any one time.

More than half (57%) of survey respondents engage one custodial or third-party agent lender, 26% work with two providers, 11% use three lenders, and 6% partner with four or more lenders.

Over one third (37%) of this year's survey respondents are extremely satisfied with the returns on their securities lending programmes, 40% are very satisfied, and 22% are moderately satisfied.

METHODOLOGY:

Beneficial owners are asked to rate the performance of their agent lenders. Respondents are asked to rate their agent lenders across 12 service categories (see below) from one (unacceptable) to seven (excellent). There are two methodologies: unweighted and weighted.

Unweighted methodology
All valid responses for each agent lender are averaged to populate unweighted tables. All beneficial owners' responses are given an equal weight, regardless of the size of their lendable portfolio. All categories are given equal weight regardless of how important they are considered to be by respondents. No allowances are made for regional variations.

Weighted methodology
The weighted table methodology makes allowances for both the size of the respondent's lendable portfolio and how important the respondents, on average, consider each category to be. An allowance is also made for differences between average scores in each region to make meaningful global averages.

Step one – weighting for lendable portfolio: A weighting is generated to reflect to the size of the respondent's lendable portfolio. Each respondent is put into a quartile depending on its total lendable portfolio. The scores of the respondent are then given a weighting based on this quartile. As the boundaries of each quartile are determined by all the responses received in this year's survey, the boundaries are unknown until the survey closes.

For the purposes of the 2020 survey all Asian responses will be given a weighting of 1. Asian responses will not be included in determining the quartile boundaries. However, all Asian responses will be subject to step two – see below.

Criteria	Weighting
AuM in lowest quartile	0.7
AuM in middle two quartiles	1
AuM in the top quartile	1.3

Step two – weighting for importance: An additional allowance is made for how important beneficial owners consider each category to be. This is done to acknowledge the fact that beneficial owners consider some categories to be more important than others.

Respondents are asked to rank each service category in order of how important the function is to them. An average ranking is then calculated for each of the twelve categories (11= highest ranking, 0 = lowest). This number is then divided by 5.5 to give a weighting within a theoretical band between 0 and 2, with an average of one. Again, basing weights around one is done to preserve comparability with unweighted scores.

To illustrate, if every respondent considers category X to be the most important it would get an average rank of 11. This is then divided by 5.5 to provide the weighting for category X, i.e. 11 / 5.5 = 2.

TABLES AND SCORES

Overall tables
The overall table contains all responses for a lender regardless of its relationship with the beneficial owner, whether custodial or agent. The following scores are calculated: separately for each region, a global total, a global average, and for each service category.

Regional scores are the average of all responses from beneficial owners based in that region (it is the location of the beneficial owner, not the lender, that is relevant). There are three regions. A lender must receive a different minimum number of responses to qualify in each: six in the Americas, five responses in Europe, Middle East and Africa (EMEA) and four in Asia Pacific. To qualify globally, a lender must qualify in at least two regions.

Custodial and third-party agent lender tables
Ratings of lenders acting in a custodial or third-party agent lender capacity are recorded in separate tables. The respondent is asked to define their relationship with the lender: custodial, agent or both. If the relationship involves both forms of arrangement, the response counts for both the custodial and agent lender tables. Therefore, some responses will be included in both the custodial and third-party agent lender tables. All the scores calculated for overall lenders will be replicated for custodial and third-party agent lenders separately.

The qualification criteria is lower for the custodial and agent lender tables compared with overall. To qualify for either the overall custodial and third-party agent lender tables, lenders need four responses in the Americas, four in EMEA, and three in Asia Pacific.

Service categories
Respondents are asked to rate each of their providers from one to seven across 12 service categories. The ratings of respondents for each service category are averaged to produce the final score for each provider. The service categories are:

- Income generated versus expectation
- Risk management
- Reporting and transparency
- Settlement and responsiveness to recalls
- Engagement on corporate action opportunities
- Collateral management
- Relationship management/client service
- Market coverage, developed markets (DM)
- Market coverage, emerging markets (EM)
- Programme customisation
- Lending programme parameter management
- Provision of market and regulatory updates

To qualify for each service category table, the lender needs the same amount of responses as to qualify for the corresponding main table; i.e., to qualify for an overall custodian or agent lender service category, the lender must qualify in two of the three regions (for example, five responses for that category in the Americas and four in EMEA). A lender can qualify in some categories and not others – it does not have to qualify globally for all service categories to be included in any particular service category.

VALID RESPONSES
It is possible for a lender to qualify globally or regionally without qualifying for all service category tables, if it receives n/a responses for certain categories. For example, it may not offer emerging market coverage and therefore receive a string of n/a ratings in that category but qualify for all other categories, regionally and globally.

If a lender receives two or more responses in the same region from the same beneficial owner, an average of the ratings will be taken and it is considered to be one response for qualification purposes. If a lender receives two or more responses from the same client in different regions (e.g. pension scheme X rates lender Y in EMEA and the Americas) the responses are not averaged and are counted as separate responses for qualification purposes.

J.P. Morgan:
In the overall rankings, J.P. Morgan received the highest global average (6.69) and the highest total global score (20.06) on an unweighted basis, driven by an 'excellent' rating of 7 in Asia Pacific. The bank's ranking has improved year on year, rising from fourth place overall in the unweighted tables in 2019 when it achieved a global average of 6.29.

In the weighted results, J.P. Morgan ranks second with an average global score of 6.48, taking the top spot in Asia Pacific with 6.42.

In the unweighted service categories, this year's survey respondents gave J.P. Morgan the highest scores across all lenders for engagement on corporate actions, reporting transparency and income generated (all at 6.75), as well as rating it highly for its coverage in emerging markets (6.62).

As a custodial lender, J.P. Morgan clinched the top spot on an unweighted basis with a 6.61 average global score. It came in second place on a weighted basis, with an improved global average score of 6.48 compared to 5.79 in 2019. In both the weighted and unweighted tables, the bank achieved the highest scores in EMEA and Asia Pacific among the custodial lenders that qualified.

J.P. Morgan came first in 10 of the service categories for custodial lenders on an unweighted basis and four categories on a weighted basis. Notable results include respondents' favourable views of its performance around engagement on corporate actions, programme customisation, provision of market and regulatory updates, and reporting transparency.

As a third-party agent lender, J.P. Morgan was ranked first in the weighted and unweighted overall tables. It received its highest regional ranking in the Americas where it achieved a weighted score of 6.66 and an unweighted score of 6.61.

When ranked against other qualifying third-party agent

ALL LENDERS (UNWEIGHTED)

COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Citi	5.74	6.13	5.80	17.67	5.89
Deutsche Agency Lending	6.71				
eSecLending	**6.96**	6.02		12.98	6.49
Goldman Sachs Agency Lending	6.60	**6.58**		13.18	6.59
JPMorgan	6.70	6.36	**7.00**	**20.06**	**6.69**
RBC Investor & Treasury Services	6.23	6.44		12.67	6.34
State Street	6.42	6.14	6.92	19.48	6.49

ALL LENDERS (WEIGHTED)

COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Citi	4.75	6.00	5.36	16.11	5.37
Deutsche Agency Lending	**6.79**				
eSecLending	5.22	6.44		11.66	5.83
Goldman Sachs Agency Lending	5.65	6.09		11.74	5.87
JPMorgan	6.51	6.50	**6.42**	19.43	6.48
RBC Investor & Treasury Services	4.98	5.35		10.33	5.17
State Street	6.27	**6.89**	6.34	**19.50**	**6.50**

lenders, J.P. Morgan dominated the service categories. It came top in seven service areas (unweighted). This includes scores of 7 for lending programme parameter management, relationship management, reporting transparency, and provision of market and regulatory updates. It also swept the board in the weighted table, achieving the highest scores in nine of the 12 service categories, up from one category in 2019.

Survey respondents commended the bank for its high level of customer service and reporting systems. A number of Americas-based respondents also praised J.P. Morgan for the proactive manner in which it communicates with clients, with one beneficial owner highlighting the bank as one of its primary sources of knowledge within the securities lending industry.

ALL LENDERS SERVICE CATEGORIES (UNWEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Citi	5.86	6.00	5.77	5.95
Deutsche Agency Lending	6.40		6.60	**6.80**
eSecLending		6.50	6.27	6.45
Goldman Sachs Agency Lending	**6.67**	6.61	6.50	6.56
JPMorgan	6.60	**6.75**	**6.75**	6.75
RBC Investor & Treasury Services	6.36	6.46	6.33	6.60
State Street	6.53	6.38	6.31	6.63

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Citi	6.27	6.25	6.05	5.86
Deutsche Agency Lending	**6.80**		**6.80**	**6.80**
eSecLending	6.45	6.45	6.45	6.45
Goldman Sachs Agency Lending	6.67	6.56	6.72	6.59
JPMorgan	6.56	**6.62**	6.69	6.69
RBC Investor & Treasury Services	6.29	5.90		6.29
State Street	6.50	6.29	6.44	6.25

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Citi	6.27	5.59	6.18	5.86
Deutsche Agency Lending	**7.00**	6.60	**6.80**	**6.80**
eSecLending	6.82	6.45	6.45	6.27
Goldman Sachs Agency Lending	6.72	6.44	6.50	6.61
JPMorgan	6.75	**6.75**	6.69	6.69
RBC Investor & Treasury Services	6.60	6.47	6.40	6.21
State Street	6.63	6.25	6.50	6.50

State Street:

Beneficial owner survey respondents continue to rate State Street highly, enabling it to gain the highest global average across all lenders in the weighted rankings (6.5) in 2020. This is the third year in a row that it has achieved this accolade. The bank received both the highest global total and ranked first in the Americas with a score of 6.89.

It also fared better in the unweighted overall table than last year, with its global average increasing from 6.28 to 6.49.

When compared to all lenders according to its performance across service categories (weighted), State Street came out on top for collateral management (6.65) and lending programme parameter management (6.5).

Among custodial lenders, State Street delivered a strong performance in the weighted service categories table. In 2019, it came top in one service category within the

ALL LENDERS SERVICE CATEGORIES (WEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Citi	5.60	3.63	7.61	5.41
Deutsche Agency Lending	6.35		**9.13**	6.43
eSecLending		3.86	8.12	5.70
Goldman Sachs Agency Lending	6.00	3.84	8.15	5.61
JPMorgan	6.49	**4.28**	8.24	6.37
RBC Investor & Treasury Services	5.17	3.43	7.04	5.31
State Street	**6.65**	4.19	9.04	**6.50**

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Citi	4.00	2.80	4.61	3.20
Deutsche Agency Lending	**4.55**		**5.42**	**3.90**
eSecLending	4.03	2.82	4.78	3.47
Goldman Sachs Agency Lending	4.07	2.73	4.87	3.44
JPMorgan	4.38	**3.00**	5.31	3.82
RBC Investor & Treasury Services	3.45	2.31		2.97
State Street	4.39	2.95	5.32	3.70

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Citi	6.19	6.66	10.08	6.87
Deutsche Agency Lending	**7.27**	8.21	**11.62**	**8.30**
eSecLending	6.68	7.58	10.39	7.12
Goldman Sachs Agency Lending	6.36	7.31	10.09	7.39
JPMorgan	6.98	**8.45**	11.40	8.14
RBC Investor & Treasury Services	5.57	6.57	8.86	6.19
State Street	7.10	8.08	11.52	8.21

CUSTODIAL LENDERS (UNWEIGHTED)

COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Citi	5.94	5.90	5.80	17.64	5.88
JPMorgan	**6.70**	6.13	**7.00**	**19.83**	**6.61**
RBC Investor & Treasury Services	6.23	**6.44**		12.67	6.34
State Street	6.42	6.14	6.92	19.48	6.49

CUSTODIAL LENDERS (WEIGHTED)

COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Citi	5.11	5.34	5.36	15.81	5.27
JPMorgan	**6.51**	6.51	**6.42**	19.44	6.48
RBC Investor & Treasury Services	4.98	5.35		10.33	5.17
State Street	6.27	**6.89**	6.34	**19.50**	**6.50**

equivalent rankings; this year it moved up to the top of the table in nine service areas. Respondents rated the bank especially highly for its risk management approach, settlement and responsiveness, as well as income generated.

In the unweighted table, State Street achieved the joint highest score for coverage in developed markets alongside J.P. Morgan (6.5), and it was the frontrunner for its coverage of emerging markets (6.29).

On a regional basis, respondents in the Americas placed State Street first among custodial lenders with a score of 6.89 on a weighted basis. It achieved the highest global average (6.5) in the weighted regional table for custodial lenders, as it also did in 2019 and 2018.

One respondent stated that State Street had been an "excellent partner" in helping to establish its lending programme. Other respondents pointed to the proactive support State Street offers them, while another noted some improvements in the bank's responsiveness.

Goldman Sachs Agency Lending:

Goldman Sachs Agency Lending (GSAL) came second in the overall unweighted category with an average score of 6.59. It improved on its score in the EMEA region, receiving a rating of 6.6 in 2020 as opposed to last year's 6.57. Yet it was its score of 6.58 which saw it retain the top spot in the Americas region as it did in 2019 and 2018.

GSAL also performed well in the service categories. In the unweighted lists, the firm was top for collateral management (6.67) and came second for engagement in corporate actions (6.61), developed markets coverage

CUSTODIAL LENDERS SERVICE CATEGORIES (UNWEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Citi	5.86	6.00	5.57	5.69
JPMorgan	**6.54**	**6.71**	6.00	**6.71**
RBC Investor & Treasury Services	6.36	6.46	**6.33**	5.50
State Street	6.53	6.38	6.31	6.63

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Citi	6.14	6.07	5.92	5.79
JPMorgan	**6.50**	6.08	**6.64**	**6.64**
RBC Investor & Treasury Services	6.29	5.90	5.55	5.87
State Street	**6.50**	**6.29**	6.44	6.25

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Citi	6.21	5.43	6.07	5.93
JPMorgan	**6.71**	**6.71**	**6.64**	**6.64**
RBC Investor & Treasury Services	6.60	6.47	6.40	6.21
State Street	6.63	6.25	6.50	6.50

(6.67), market coverage in emerging markets (6.56), and programme customisation (6.72).

In the tables for third-party agent lenders, the bank scored the highest score for EMEA on a weighted basis, and received the highest global total (weighted and unweighted).

When ranked against other third-party agent lenders across service areas, GSAL gained the top score for income generated (8.15) in the weighted tables, and achieved the highest rating in four service categories within the unweighted tables.

One beneficial owner respondent in the America stated that they were extremely satisfied with Goldman Sachs Agency Lending and the high level of service it provides, while a Europe-based respondent praised the innovation demonstrated by the bank.

eSecLending:

eSecLending performed well in the unweighted overall tables in 2020, ranking joint-third among all lenders with a rating of 6.49. It was ranked particularly highly by EMEA-based beneficial owner respondents, which saw it rise to first place in this region with a score of 6.96, up from 6.57 in 2019.

In the weighted rankings, eSecLending gained its highest score in the Americas (6.44), followed by 5.22 in EMEA, taking its average score to 5.83.

Among the service categories, eSecLending scored well in both the unweighted and weighted tables. In the unweighted rankings, the lending firm came second in relationship management, scoring 6.82, while coming third in market coverage in emerging markets (6.45) and engagement on corporate actions (6.5). In the weighted version of the tables, eSecLending was third in engagement on corporate actions and emerging market coverage.

Among third-party agent lenders, eSecLending gained the third highest global average (unweighted), aided by its strong performance in EMEA. It also achieved the top spot for collateral management among third-party agent lenders on an unweighted basis, picking up a score of 6.83.

The lender garnered some glowing reviews, with one respondent stating that it "continues to outperform in all areas". It was commended for outstanding client engagement, including its proactive approach to new ideas and opportunities for clients.

Deutsche Agency Lending:

Deutsche Agency Lending fared well in the all lenders unweighted tables for EMEA, scoring an impressive 6.71. However, it was in the weighted category where the lender really shone, taking the top spot with a score of 6.79 in EMEA and continuing the success it saw last year when it also achieved the highest ranking in this region.

The lender also scored favourably in the service categories, both unweighted and weighted. Deutsche Agency Lending was top in seven of the twelve categories in the unweighted section: lending programme parameter management (6.8), coverage of developed markets (6.8), programme customisation (6.8), provision of market and regulatory updates (6.8), relationship management (7), risk management (6.8), and settlement and responsiveness (6.8).

CUSTODIAL LENDERS SERVICE CATEGORIES (WEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Citi	5.34	3.53	7.10	4.98
JPMorgan	6.47	**4.29**	8.30	6.40
RBC Investor & Treasury Services	5.17	3.43	7.04	4.43
State Street	**6.65**	4.19	**9.04**	**6.50**

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Citi	3.79	2.62	4.34	3.05
JPMorgan	4.38	2.77	**5.32**	**3.83**
RBC Investor & Treasury Services	3.45	2.31	3.75	2.77
State Street	**4.39**	**2.95**	**5.32**	3.70

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Citi	5.90	6.23	9.53	6.67
JPMorgan	7.00	**8.48**	11.42	8.16
RBC Investor & Treasury Services	5.57	6.57	8.86	6.19
State Street	**7.10**	8.08	**11.52**	**8.21**

In the weighted category, Deutsche Agency Lending came first in income generated, market coverage in developed markets, programme customisation, provision of market and regulatory updates, relationship management, risk management, and settlement and responsiveness.

Survey respondents in Europe were particularly complimentary about the firm, highlighting a number of areas where Deutsche Agency Lending excels, including its flexibility around reports, programme parameters, and delivering information about the market. Another added that they are "very happy" with the relationship they have built with the firm.

RBC Investor & Treasury Services:

RBC Investor & Treasury Services (RBC I&TS) achieved the highest unweighted score for the Americas (6.44) among custodial lenders. It also qualified in the EMEA region, where it ranked third with a score of 6.23.

It came first among custodial lenders for income generated (6.33) on an unweighted basis, and achieved the second highest score in the reporting transparency and engagement on corporate actions service categories.

In the overall unweighted tables for all lenders, the organisation received a score of 6.44 in the Americas and 6.23 in EMEA.

Respondents viewed relationship management and lending programme parameter management as RBC I&TS's strongest performance areas across service categories, giving it a score of 6.6 in both of these areas in the table comparing all lenders on an unweighted basis.

A European beneficial owner respondent praised RBC I&TS for its ability to react quickly to changing client needs. Some Americas-based respondents noted the professionalism, operational efficiency, and transparency provided by the bank. These qualities were viewed by one respondent as facilitating a high level of trust in its lending programme with RBC I&TS.

Citi:

Citi maintained a consistent score throughout the all lenders unweighted and weighted tables, receiving average global scores of 5.89 and 5.37, respectively. The lender also saw a significant improvement on its score in Asia Pacific, scoring 5.8 and 5.36 in the unweighted and weighted divisions, as opposed to last year's 5.56 and 5.09.

In the unweighted service categories, Citi improved on last year's score in emerging markets coverage, achieving 6.25 in 2020. The lender demonstrated robust performances in

THIRD-PARTY AGENT LENDERS (UNWEIGHTED)

COMPANY	EMEA	AMERICAS	GLOBAL TOTAL	AVERAGE
Citi		6.22		6.22
eSecLending	**6.96**	6.02	12.98	6.49
Goldman Sachs Agency Lending	6.60	6.58	**13.18**	6.59
JPMorgan		**6.61**		**6.61**

THIRD-PARTY AGENT LENDERS (WEIGHTED)

COMPANY	EMEA	AMERICAS	GLOBAL TOTAL	AVERAGE
Citi		6.21		6.21
eSecLending	5.22	6.44	11.66	5.83
Goldman Sachs Agency Lending	**5.65**	6.09	**11.74**	5.87
JPMorgan		**6.66**		**6.66**

the risk management (10.08), settlement and responsiveness (6.87), and income generated (7.61) service categories on a weighted basis.

On a weighted basis, Citi came in third place among custodial lenders (5.27) and second among third-party agent lenders (6.21) in terms of global average scores.

When ranked against other third-party agent lenders, Citi claimed first place for its coverage of both developed and emerging markets on a weighted basis.

One survey respondent based in Europe noted that the lender was "very responsive to queries", while another in the Americas praised Citi for going out of its way to help accommodate its lending goals. Another respondent to this year's survey said that Citi had been instrumental in helping them to create and expand their lending programme. ■

THIRD-PARTY AGENT LENDERS SERVICE CATEGORIES (UNWEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Citi	5.62	5.83	5.92	6.08
eSecLending	**6.83**	6.50	6.27	6.45
Goldman Sachs Agency Lending	6.67	**6.61**	**6.50**	6.56
JPMorgan	6.50	6.50	5.75	**7.00**

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Citi	6.38	6.27	5.92	6.00
eSecLending	6.45	6.45	6.45	6.45
Goldman Sachs Agency Lending	**6.67**	**6.56**	6.72	6.59
JPMorgan	6.00		**6.75**	**7.00**

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Citi	6.23	5.69	6.15	5.77
eSecLending	6.82	6.45	6.45	6.27
Goldman Sachs Agency Lending	6.72	6.44	6.50	6.61
JPMorgan	**7.00**	**7.00**	**6.75**	**6.75**

THIRD-PARTY AGENT LENDERS SERVICE CATEGORIES (WEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Citi	5.56	3.61	8.03	5.70
eSecLending	6.05	3.86	8.12	5.70
Goldman Sachs Agency Lending	6.00	3.84	**8.15**	5.61
JPMorgan	**6.53**	**4.22**	7.96	**6.70**

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Citi	**4.20**	**2.90**	4.65	3.35
eSecLending	4.03	2.82	4.78	3.47
Goldman Sachs Agency Lending	4.07	2.73	4.87	3.44
JPMorgan	4.02		**5.40**	**4.06**

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Citi	6.33	6.96	10.35	6.98
eSecLending	6.68	7.58	10.39	7.12
Goldman Sachs Agency Lending	6.36	7.31	10.09	7.39
JPMorgan	**7.37**	**8.88**	**11.59**	**8.28**

US Beneficial Owners Roundtable

On December 6, 2019, executives from the lender, borrower, agent lender, consultant, and data provider community gathered in New York to discuss some of the key issues influencing the US securities lending landscape. Here, we present some of the highlights from the roundtable discussion.

PARTICIPANTS:

Nancy Allen, global product owner at DataLend

Elaine Benfield, senior counsel at Vanguard

Christopher Benish, CFA, managing analyst at State of Wisconsin Investment Board

John Fox, director, head of client management and sales for North America at BNY Mellon

Axel Hester, director of securities lending at State Street Global Advisors

Greg Korte, partner, custody advisory services at Aon

Michael Madaio, managing director, collateral funding and trading at Pershing LLC

Bill Smith, managing director, Americas sales executive at J.P. Morgan

Francesco Squillacioti, global head of client management for securities finance at State Street

Chair: Louise Fordham, special reports editor at Global Investor

CHAIR: What key trends have shaped the securities lending market in 2019?

NANCY ALLEN: As we look back on 2019, it's important to remember that 2018 was a record post-crisis year with gross revenue reaching nearly $10bn. The first three quarters of 2018 benefitted from rising markets which resulted in higher volumes, but in the fourth quarter markets really began selling off, driving balances down while fees remained flat, resulting in a drag on revenue. Ahead of 2018 year-end, we saw significant de-risking by hedge funds, and although we saw equity growth in Q1 2019, hedge funds generally sat on the side-lines into 2019 and maintained a long bias which is not beneficial for lending markets.

The key themes hitting both equity and fixed income markets in 2019 have been global macro uncertainty driven by trade wars, Brexit, and central bank actions, all resulting in a lack of conviction from hedge funds and alternative investment managers and decreased demand for high quality liquid assets from a collateral perspective.

Beneficial owner lendable assets were $20tn on average in 2019, up from $19.5tn in 2018. However, average balances dropped from $2.4tn in 2018 to about $2.2tn in 2019. Revenue in 2019 was down 13% relative to 2018, coming in at $8.66bn, with declines across all regions and across asset classes, driven by both lower balances and lower fees. The only exception is Asia Pacific, where there was a marginal increase in balances.

On a more positive note, we did see a bit of a recovery in Q3-4 2019, specifically in the equity markets where a handful of specials drove revenue higher. If we look at revenue by fee bucket, that also shows the impact of these high-earning securities; special securities, defined as those trading 500bps and above, made up 46% of total revenue this year, compared to 37% in 2018.

In 2019, the top five securities generated $680m – that's 8% of total revenue, whereas the top five in 2018 generated $465m, or 4.5% of total revenue. Revenue generated by Tesla in 2018 was $142m, eclipsing the top earner of 2017 which was Snap at about $110m. Meanwhile, Beyond Meat generated $193m in only eight months in 2019. So, although 2019 was a year where we saw a lack of conviction and global macro conditions that resulted in lower balances and lower fees, there was significant revenue generated by some very concentrated names and beneficial owners who held those names would have had a more positive 2019 experience.

As we look back on 2019, it's important to remember that 2018 was a record post-crisis year with gross revenue reaching nearly $10bn.

Nancy Allen, DataLend

FRANCESCO SQUILLACIOTI: We have also seen supply growing over the past 18-24 months. There has been a lot of interest from beneficial owners and asset managers who have never lent before looking to get into the market, which has had an impact on supply. On the other hand, as Nancy highlighted, demand has been a little bit depressed. And while specials have been few and far between, they have been name-specific and pretty impactful.

MICHAEL MADAIO: On our side, as a broker dealer with retail clients, we have seen our fully-paid lending product grow by 25% in terms of client numbers. Part of the reason is interest driven by these particular names; when they hit the press people ask what they can earn if they were to lend their securities. It's been good at driving participation.

JOHN FOX: I would agree that this year has been largely about the few names that have driven most of the revenue opportunity. That's an unusual state of affairs, but in Q3 2019 we had a single name that was representing 10-12% of the market's returns. When situations like that arise, it's very important to articulate that to clients.

MICHAEL MADAIO: In terms of volume, one of the things that happened in 2019 is that short sellers themselves were scared away. The market went against them to begin with, and while these particular specials are outliers there are still hundreds of securities that trade at negative rates. That creates an immediate negative return for the short seller, especially if there are also dividends to pay. It can get expensive very quickly, more so if the price moves against you.

There has been a lot of interest from beneficial owners and asset managers who have never lent before looking to get into the market.

Francesco Squillacioti, State Street

FRANCESCO SQUILLACIOTI: In some ways the fact that the market has been a little bit depressed compared to a few years ago has caused everybody to innovate and find new ways of doing things. There is a lot happening and a lot of information for clients to consume. Those of us who do this for a living and are immersed in securities finance all the time need to break it down and make it digestible for clients and their boards because they are very interested in, 'What are other people doing? How can we improve things? How can we generate revenue within a certain risk framework?'

JOHN FOX: Beneficial owner boards are often interested in best practices across the industry. They want to know, both in terms of their risk profile and in terms of the specific parameters of their programme, how they compare with their peer group. That's particularly the case when it comes to asset managers. They focus on their securities finance returns, and if their lending activity generates superior returns relative to their peers, they want to know what caused that deviation and why their fund family has outperformed another fund in a competing family when the investment profile is virtually the same.

CHAIR: Has there been a shift in the way beneficial owners think about lending?

CHRISTOPHER BENISH: What has been encouraging for me as a beneficial owner is that the discussions have evolved not from just, 'What is securities lending?' and 'What's my number at the end of the month in terms of earnings?' but to really thinking through, 'What is the securities lending market telling me about the

broader market? How can I integrate what that information is sharing into the strategies that the portfolio managers are running?' It's a much more integrated discussion across our internal staff around securities finance in general, and that's one of the directions that we're trying to move in.

We don't want to think of securities lending as this isolated, standalone silo that's walled off from everybody else. We want it to be about, 'What are we seeing in lending? How does that impact what we're seeing in borrowing? Why are there differences? What strategies can we maybe employ or what arbitrage opportunities are out there that we could take advantage of? How do we best employ our balance sheet from a funding perspective, whether it's funding leverage or arbitrage opportunities?' Securities lending is one small piece of that discussion, and it's becoming a much more integrated conversation, which has been a really interesting development.

We are evaluating considerations outside of a narrow historical focus on returns in securities lending.

Axel Hester, State Street Global Advisors

FRANCESCO SQUILLACIOTI: We're seeing a lot more of an evolution among our client base where beneficial owners who historically were only lending securities are now also running leveraged strategies and crossing over to borrowing at the same time. This makes it important not just to have a securities lending discussion, but a broader securities finance discussion. And it's important to be able to meet those client needs in a holistic way.

AXEL HESTER: We are evaluating considerations outside of a narrow historical focus on returns in securities lending. We have started to look much more heavily at the whole holistic programme; for example, questions that are examined include 'What are the risks associated with lending? What is the risk-return trade-off that has actually been experienced here?' Additionally, 'Are we considering ESG (environmental, social, governance) aspects appropriately? When we participate in securities lending, are we considering QDI (qualified dividend income) aspects? How is this impacting our portfolios?' We are now considering all of this rather than just asking, 'What's my number at the end of the month?'.

I think that shift has allowed us to take a couple of steps forward in developing our organisational understanding and informing our investors. We are helping stakeholders understand that risks do exist but they are manageable if you know what they are and where they're coming from. Therefore we can strike the correct balance between risk and reward more effectively and understand how it's impacting our portfolio and investment philosophies as a whole.

CHAIR: Is traction building behind ESG considerations in the US securities lending market?

BILL SMITH: It is, although perhaps at a pace behind Europe for the moment. ESG will be something that is yet another factor that we will need to support in the future. Clients are going to have requirements around ESG and we are going to expand our platforms and product offerings to include customised collateral sets and customised lending rules that will be supportive of clients' ESG requirements. It will take technology investment to expand these capabilities.

NANCY ALLEN: The focus on ESG is a reflection of the shift of securities lending from a back-office commodity into a front-office investment product. With that comes additional overlays and strategies that need to be deployed. There is more to consider than simply ticking a box and enrolling in lending; now beneficial owners are considering ESG, collateral, different types of borrowers and new trade structures.

AXEL HESTER: As investment managers we want to know we are upholding our ESG principles and our governance standards throughout the investment process, which includes securities lending activities. There are ways that you can manage ESG principles effectively, accomplish our goals, and still participate in lending. They are not mutually exclusive. However, there may be different approaches on how one manages the investment process, and hence, how one manages their lending programme to satisfy those governance requirements.

CHRISTOPHER BENISH: Ultimately, I don't think it's fundamentally different from how most experienced beneficial owners evaluate securities lending today, which is, 'What's my fiduciary duty? What's the cost benefit, risk-reward of each individual name, transaction, etc?' This is one more dimension to that.

CHAIR: Are alternative lending models, such as peer-to-peer, gaining momentum in the US?

CHRISTOPHER BENISH: We're actively engaged in peer-to-peer discussions and in thinking through what it will take to put a better peer-to-peer model in place. I've been going

to industry conferences for 14 years now and peer-to-peer has always been on the table but it feels different this time, it feels like there's actually some momentum behind it. We have live trades on with peers, not just in the securities lending space but in repo lending and borrowing, etc. It has legs. We see it as having a lot of benefits in terms of alignment of interests and in terms of counterparty credit. There's a diversification to including our peers as counterparties versus the traditional banks and broker dealers. I think they all probably have a place in the end, but peer-to-peer is something that we are very interested in and looking at in depth.

Might I suggest that we consider re-branding securities lending 'peer-to-peer'?

Elaine Benfield, Vanguard

MICHAEL MADAIO: A key consideration with peer-to-peer is infrastructure. If agent lenders are going to utilise their infrastructure then that makes it much more of a doable scenario, and I think we're starting to see that.

FRANCESCO SQUILLACIOTI: Peer-to-peer is a great way for diversification to happen, and it's another outlet for demand in some cases, so I do think it has legs and should grow. Given the evolving securities finance discussion, I feel the time is right in terms of clients being more comfortable with this type of structure. From the standpoint of the beneficial owner or the underlying lender we've been working with, there's been a period of gradually becoming comfortable with various types of lending structures and exposure.

State Street recently launched its Direct Access Lending product, which is our peer-to-peer model. What we sought to do was to make a model that, from the agent lending side and from the hedge fund side, looked as much like what they were used to as possible. So, a model where we're providing additional lending opportunities while diversifying the risk and indemnifying it as an agent lender. From the hedge fund point of view, we aimed to provide the benefits of direct exposure to a beneficial owner, but through a managed platform that mitigated potential operational burden.

ELAINE BENFIELD: Might I suggest that we consider re-branding securities lending 'peer-to-peer'? The terminology suggests peer-to-peer is a mutual fund lending to a mutual fund or a hedge fund lending to a hedge fund, for example, whereas it could actually be a mutual fund lending to a hedge fund. The name could be particularly confusing for those not familiar with the securities lending industry. Is it not simply approving lending securities to new types of borrowers under existing agency lending programmes?

BILL SMITH: Peer-to-peer means different things to different people at this stage. There is traction, but it is still in the formative stages. There are different ways for a beneficial owner to expand their distribution network through their agent lending bank simply by using non-traditional borrowers. That's different than saying, 'A pension plan is going to lend directly to another pension plan.'

The question I would have for beneficial owners is around the infrastructure they envision using for peer-to-peer. Do they see a market infrastructure built out and standardised to a point where it will be suitable to cover these activities, or do they expect to rely on their agents or existing infrastructures to change the way that they transact with borrowers, and potentially lenders, across existing platforms.

CHRISTOPHER BENISH: The way I think of it is, we have a limited number of cycles to spend on this kind of activity, and so where do I want to spend my energy? I want to spend my energy on maximising the utility of my balance sheet and maximising how we fund and monetise our asset base. I don't necessarily want to build out a securities lending infrastructure, I think that already exists in the market and it functions really well. My challenge to the traditional lending agents of the world is how to best integrate new participants and new counterparties that perhaps want to participate in a different way than they have in the past, how to best be that infrastructure for those who want to trade with each other.

BILL SMITH: I think many of us in the industry are looking at that as an opportunity. We have platforms through which we can connect an insurance company that's long cash that wants to do repo with a money fund directly. There are also Fintechs out there who are looking to engineer technology that can match borrowers and lenders. Ultimately, it's going to be a question of how can you get access to safety and scalability through a suitable platform's infrastructure. If you don't want to develop the back or middle office to facilitate peer-to-peer lending, then you might want to use an existing platform that gives you access to the names that you would choose to have as counterparties, and may even bring you names you didn't know might qualify as counterparties down the road.

CHAIR: Is there similar momentum around other lending models, such as central counterparty clearing (CCP)? For example, DTCC is working on a securities finance CCP and OCC is expanding its exchange offering – is there significant appetite for such ventures?

NANCY ALLEN: Central counterparty clearing houses are one component of the anticipated growth strategies in the financing markets. Several years ago, we established EquiLend Clearing Services, which provides connectivity to global CCPs, including OCC and Eurex. We are well positioned to connect to any global CCP that enables clearing of securities lending transactions. We see central clearing as a route to market that is gaining more and more traction, and we are helping to facilitate that trade.

It will be about platform evolution and it will be achieved through investment.

Bill Smith, J.P. Morgan

FRANCESCO SQUILLACIOTI: Everybody is trying to become as capital efficient as possible, and I think ultimately CCPs could be an attractive option for people to get into because it is very efficient from a capital standpoint.

JOHN FOX: We're always interested in alternative forms of distribution and different routes to market, but one of the elements we need to consider is that every distribution model has a unit cost associated with it and that unit cost often encompasses our cost of capital. We have to take into account the return-on-capital (ROC) hurdles that each of these models represent, and determine whether it's something that's going to be viable on a large scale or just to a more modest degree.

CHRISTOPHER BENISH: It's a model that works for options, it works for futures, it's working for repo, and it could work for swaps. I have yet to be convinced that CCPs won't work for securities lending. It might not be a wholesale change in terms of how the market operates but it is one more tool in the toolbox.

BILL SMITH: One of the pieces that I think is different for securities lending is the longstanding existence of indemnification risk mitigation that the lending agents provide, and to drive that through the CCP model becomes a bit of a different question. The CCPs have effectively been self-insured by and amongst the member entities. We have clients who would be more than happy to allow us to distribute through a CCP as long as we maintain the indemnification against the borrowers on the other side. The question, from our perspective, is whether that is a sensible capital and technology investment.

CHAIR: As the market evolves and we enter a new decade, how can agent lenders safeguard their business models?

AXEL HESTER: I think that the model is relatively safe if it's well managed. The fixed costs to create the securities lending infrastructure are significant, and to the extent that agent lenders properly invest to maintain that infrastructure, and invest to maintain the leading edge in developing new infrastructure -- that's valuable. There are a few asset managers that have the economies of scale to support sufficient infrastructure in-house, but very few that can economically develop and improve it on the scale that agent lenders can.

That said, anything can be disrupted. We've seen that in other industries, such as the retail industry, so agent lenders always have to keep their eyes open and look at what may be coming from an unexpected direction.

NANCY ALLEN: As the market changes and evolves, agent lenders are investing more in data and technology. It's critical that they take the beneficial owner along with them as they make these investments. Maintaining an informative and active dialogue with beneficial owners will help position both parties to capture optimal value going forward.

BILL SMITH: I think to use the term 'safeguard' almost presumes that the model is static; the model is very active. We are investing in technology by either directly developing it ourselves, investing in bought technology, or investing in Fintech companies who are developing tools to continually try to stay ahead of the needs of our clients. The business that you will see us in three years from today will be very different from the business we were in three years ago, or that we are in today. It will be about platform evolution and it will be achieved through investment. As we go through the next phases of the Uncleared Margin Rules (UMR) that's going to drive a further convergence of traditional securities lending, collateral management, and liquidity management. This means we will be facing an environment where these are going to become increasingly interrelated. This is going to provide opportunities for clients to further leverage our securities lending platforms and services.

JOHN FOX: This is a market subject to constant regulation and complying with that regulation requires innovation. It's

great if you have talented, innovative people on your team, but you need the funding support of the firm behind the agent lending programme in order to be able to commit the necessary capital so that those innovations come to fruition. That's especially true in those years where securities lending returns aren't on the high side, because we are complying with a constantly changing regulatory environment, and it's important that the capital expenditure is there to allow agent lenders to solve these new issues.

GREG KORTE: There are some beneficial owners that don't have the resources to drive innovation. You can't leave those firms behind; you have to make sure you are innovating for them.

There are some beneficial owners that don't have the resources to drive innovation. You can't leave those firms behind; you have to make sure you are innovating for them.

Greg Korte, Aon

CHAIR: What types of new technologies are helping lenders, borrowers, and other industry participants to improve their operations?

NANCY ALLEN: We've spent nearly two decades focused solely on the securities finance market and automation, but we are now also looking at bringing greater automation to the swaps market and to the collateral markets. We're also looking at AI (artificial intelligence) and machine learning; for example, we recently conducted a proof of concept where we deployed these technologies to bring greater efficiency to the post-trade reconciliation processes.

BILL SMITH: There is a myriad of places where you see technology improvements, from enhancing inventory visibility through potentially broadcasting it to more platforms, to portfolio optimisation through AI, to trading platform integration, to incremental data sources. Technology can also be employed to address the convergence of collateral and securities finance, if for example, a beneficial owner is looking at their portfolio and asking, 'How many purposes can this security serve today? Which is the most efficient and how do I optimise that against the cost of moving it from one use to another?'

JOHN FOX: The velocity of change is accelerating, to the point where the concept of predictive analytics around loan activity, for example – which was something that was only just being talked about a year or two ago – is now something that's on the short-term horizon. We talked earlier about the ability to invest in these latest innovations and that there is a huge capital expense to consider to make these things come to fruition, but the motivation is that we're all working together – the beneficial owners, the borrowers and the agent lenders – to bring these tools to market.

FRANCESCO SQUILLACIOTI: I would underscore the use of predictive analytics, it is something that is becoming increasingly important and something that we are focused on. The other piece of the equation is client technology. It's about making sure that they have access to information, and to different cuts of information in a shorter timeframe.

AXEL HESTER: From our perspective, it's about front-to-back integration where we have one system where we can go and see when a trade is failing, when a trade gets delivered out, what rates it was delivered out at. It's about being able to see all that information simultaneously, have our cash traders be able to see it, have our portfolio managers be able to see it, trying to identify trends that are going on in the market on their own bonds in real time, trying to figure out if they want to trade on a short settle, being able to see whether a security is on loan, and whether it has settled on a return. Historically, all that information has been delivered next day, and that's if you're lucky. I think there is going to be a huge empowerment to beneficial owners when that lending information is brought live to the front office.

JOHN FOX: Banks are working on simplifying the number of systems and the workflow that lenders and borrowers have to contend with. Two years ago the focus was on reducing manual intervention and today it is on eliminating manual intervention altogether. In simplifying the workflow it's pragmatic to assume we will get to a point where there will be fewer systems involved, which will provide that increased transparency for all market participants.

NANCY ALLEN: Demand for data continues to grow, and the data is being used in non-traditional ways. Beneficial owners and portfolio managers are looking at securities lending data for portfolio construction or to drive more real-time trading decisions. They are looking at that data not just for securities lending, but across all financing to drive the efficient allocation of collateral.

GREG KORTE: It's part of my job to go around and see how firms are investing in technology this year and next year. One example of technology being applied is around

the trader – they now have five or six screens in front of them whereas a lot of it used to be phone based. AI is driving this person to be able to see a smaller and smaller set of decisions that they need to make.

Another example is using technology for a trading advantage, i.e. 'I want to go to market with my trade a millisecond before your firm, because that gives me an advantage of getting filled at a rate I want.'

CHAIR: Are US desks concerned by the impact of EU regulations, such as SFTR and CSDR? What are the most pressing regulatory issues on the agenda for the US securities finance industry?

ELAINE BENFIELD: I think most people are well versed in SFTR and its global impact, as well as CSDR from an operational and trading perspective. The macro issue is how these regulations in Europe will change the trading patterns of beneficial owners, and whether these regulations will negatively impact the securities lending industry in certain regions and push trading into other regions. As these global regulations evolve, it will be interesting to see how they impact market participation.

MICHAEL MADAIO: What about the mandatory buy-ins? Could that be an opportunity? In the US where we have Regulation SHO 204, stocks often become more expensive as broker dealers look to avoid potential buy-ins. I can imagine there could be scenarios where firms don't want to get bought in, and a market could develop to avoid those scenarios.

BILL SMITH: I think there is a lot of client education on evolving EU regulation underway currently. The hope would be that the regulation is not going to change non-EU client behaviour, but it is not insignificant. One of the challenges we have had in the Americas and in Asia Pacific is that this hasn't been part of the vernacular to the same extent that it has been in Europe, where it is more commonly understood. The implications of how it will impact clients domiciled here in the US or in Asia Pacific has not been fully concluded yet.

Looking ahead to the next year, we have a big push on upgraded infrastructure and incorporating more technology into not just securities finance but all aspects of our business.

Christopher Benish, State of Wisconsin Investment Board

FRANCESCO SQUILLACIOTI: Beyond SFTR and CSDR, Single Counterparty Credit Limits are set for implementation in January 2020. The good news is that some firms will be allowed to use their own internal models to calculate risk. However, it is not quite clear how risk-shifting is going to work for some of the transactions so that is something to keep an eye on.

CHAIR: What do you expect 2020 to bring for the US market?

GREG KORTE: Over the last couple of years, some clients have been reviewing their lending programmes in a thoughtful way to validate and put that diligence in their files, while others who are not lending want to know, 'What's the monetary decision that I'm making by staying out or going in?' That doesn't mean they don't want to engage in lending, but they do want to know what it costs or what the trade-off is revenue-wise. We also have some clients that, due to shifts in the market, are not earning as much as they did through securities lending as a couple of years ago. They are making the determination, 'Do I stay for this little bit of earnings? Is it worth it? Or do we sunset our programme?' I expect that to continue into 2020.

NANCY ALLEN: Data is being used to inform the answers to the questions Greg raises. More than ever, beneficial owners are directly consuming data and using it to drive the structure of their programme. They are also performing more detailed performance measurement to better identify opportunities and capture value. I expect these trends only to strengthen in 2020.

What about the mandatory buy-ins? Could that be an opportunity?

Michael Madaio, Pershing LLC

CHRISTOPHER BENISH: Looking ahead to the next year, we have a big push on upgraded infrastructure and incorporating more technology into not just securities finance but all aspects of our business. It's a real opportunity to better educate my investment peers within the organisation about what securities finance is and how we can better support and influence the work that they do. As an organisation, it provides an opportunity around

how we can think about utilising more strategies that take some of this data, information, and infrastructure into account and perhaps look at doing different kinds of trades that maybe we haven't participated in in the past because either we weren't structurally set up to do them or we didn't have the staff or the resources to be able to dedicate to evaluating the risk-reward trade-offs.

I would like beneficial owners to focus on the little things.

John Fox, BNY Mellon

MICHAEL MADAIO: 2020 will be all about the data – finding it, mining it. That's a huge challenge because important data is embedded in many places. We are very focused on analytics because we believe it will allow us to better position ourselves and protect our clients. We're likely to experience higher than normal volatility in the upcoming election year so we think it will be important to focus on the things we can control and the value we can deliver.

JOHN FOX: In the US, historically speaking, over a four-year cycle the presidential election year is generally the worst-performing year for markets. That uncertainty sometimes correlates to better securities lending returns, so there could potentially be some upside in securities finance revenues in 2020.

CHAIR: There remain some misconceptions around securities lending in certain quarters, so if there were one thing you would like people to know or better understand about securities lending, what would it be?

MICHAEL MADAIO: If you're a longer-term holder of a security, there's a good chance that the price of that security will be the same in six months whether or not you decide to lend your position today. However, if your peers do lend the difference between your performance and theirs will be that they monetized that opportunity and you did not.

AXEL HESTER: There are misconceptions about the risks associated with securities lending. A lot of people, who aren't familiar with and don't deal with it on a daily basis, still view securities lending as somewhat of a black box. We have to be able to communicate to this audience that it is an investment decision with a risk-reward trade-off, not all that different from other investment decisions. When properly structured, securities lending can be highly beneficial, but to structure it properly, the risks need to be understood. However, it is not just stating that fact, but rather explaining why and how. I think the only way that we can get over some of these hurdles is through further education and for people to understand that securities lending is just a different perspective than they may be accustomed to looking at investing from. It's an asset-liability match as opposed to a long-only strategy, for example, and there are additional considerations that that brings in.

ELAINE BENFIELD: I am hoping that securities lending is viewed more as a front-office function as opposed to a back-office function because I think it is a critical element of the overall portfolio management strategy. Of all the portfolio management strategies, the beauty of securities lending is that it is fully collateralised and marked daily. If you structure your securities lending programme consistent with your investment strategy and risk appetite, it can be very valuable and relatively low risk.

JOHN FOX: I would like beneficial owners to focus on the little things. For example, understanding that small tweaks to the current parameters they have in the programme – whether that's expanding to additional forms of non-cash collateral where they are already potentially indemnified, or recognising that there may be a few securities that are generating a large return – can make a big difference to their performance.

GREG KORTE: I would like asset owners to recognise that the major risks in securities lending are in the cash collateral reinvestment and exposure to commercial paper and other items, and that it is very likely that the same exposure exists in their cash fund. I would also like all beneficial owners to make decisions based on data.

BILL SMITH: The business is evolving. When you think about the growing supply of securities and new beneficial owners entering the market, we are reminded that opportunities to create value are consistently opening and being taken away by the market. We don't think of securities lending as a static product. We offer a platform where we create value for clients, and in doing so provide liquidity into markets. The markets are going to evolve in ways where we have new opportunities to create value and some clients will take advantage of these or some won't. Our job is to bring investors and beneficial owners opportunities and articulate them in a way that enables them to make informed decisions on which to take advantage of. ■

OCC: Laying the foundations for a future-fit CCP securities lending model

Matt Wolfe, vice president of securities finance at OCC, talks through the steps the US equity derivatives clearing organisation is taking to ensure its stock loan programmes meet both the near-term and future needs of market participants.

Chicago-based OCC, the world's largest equity derivatives clearing organisation, has been operating stock loan programmes for 27 years. The stock loan/hedge programme was introduced in 1993 for its clearing member firms, while the market loan programme launched in 2009. In both instances, OCC acts as the principal counterparty to both the borrower and lender in the transaction.

Average loan balances for the stock loan/hedge programme reached $72.5 billion last year. Although this was down on 2018's total ($83.3 billion), significant growth has been achieved over the last decade. In 2012, for example, average loan balances stood at $10.9 billion. OCC noted that the continued bull market of 2019 contributed to an industry-wide decline in activity balances. However, the notional value of stock loan ended 2019 very close to when 2018 started. Despite this decline OCC continues to see increased interest in clearing as cost pressures increase; during 2019 OCC had an additional seven members sign up for the stock loan programmes bringing the total to 78 clearing members.

Average loan balances for the market loan programme jumped 70% from $918 million in 2017 to almost $1.6 billion in 2018, increasing by a further 52% to $2.4 billion in 2019.

Matt Wolfe, vice president of securities finance at OCC, points to the 2010 Dodd-Frank Act and establishment of minimum risk-based capital requirements as a key driver of increased CCP usage. More recent regulatory changes, however, may also generate additional interest in the CCP securities lending model.

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>
> Matt Wolfe, vice president, securities finance, OCC

(UMR) for non-cleared derivatives continue to be applied to more and more counterparties, it is possible more firms might look for alternative ways to achieve the same financial outcome of gaining exposure to a security or hedging the risk of financing," explains Wolfe. "Securities lending through a CCP may provide opportunities to do that in an equivalent way on potentially a lower cost basis."

The fifth phase of UMR's roll-out will capture firms with an aggregate average notional amount (AANA) of non-centrally cleared derivatives greater than €50 billion from September 2020, and firms with an AANA of more than €8 billion will need to comply with the rules from September 2021. While it has predominantly been sell-side firms and some larger buy-side firms that have been captured by the first four phases of UMR, the upcoming phases are expected to impact more of the buy-side.

Building up the fundamentals and transforming for the future

OCC has been working to further improve its stock loan capabilities and ready its infrastructure and product offerings for the future needs of market participants via a three-step approach that aligns with the organisation's wider five-year plan.

Introduced by OCC's board in 2018, the strategic plan will be implemented in three stages, with the first phase known as 'reinforcing the foundation'. This focuses on strengthening the CCP's resiliency and liquidity resources, tightening its cybersecurity systems, and ensuring its technology is fit for the future.

OCC is also enhancing its risk management framework. In December 2019, the US Securities and Exchange Commission (SEC) approved phase two of OCC's Financial Safeguards Framework (FSF), which included changes to its rules, guarantee fund, stress testing and margin methodology that are designed to increase OCC's resiliency as a systematically important financial market utility (SIFMU). Phase two follows the first round of enhancements implemented in September 2018, which included resizing OCC's guarantee fund resources to cover the simultaneous default of OCC's two largest clearing members.

> "With a stronger foundation in place we will be positioned to begin work on enhanced services, new products, and to consider new ways to help our clearing members gain capital savings."

The second stage of OCC's five-year plan revolves around 'growing the base'. Wolfe says: "With a stronger foundation in place we will be positioned to begin work on enhanced services, new products, and to consider new ways to help our clearing members gain capital savings.

"Once we have grown our base among our clearing members with our products and services, we will then look outside of our typical boundaries to see where OCC could benefit financial markets more broadly in new and possibly different ways." The latter aim embodies the third phase of the strategic plan: 'innovating for the future'.

Advancement of the stock loan programmes will follow the three-step trajectory outlined above. 'Reinforcing the foundation' includes the introduction of a new technology platform for clearing stock loans. OCC is working on a new stock loan system that will continue to support both hedge and market loan transactions in largely the same manner as the current system does but will also support a new enhanced model that will more closely align with market practices and better reflect OCC's role as counterparty.

"We are also anticipating rule changes to address some of the legacy limitations of the hedge programme in order to capture additional data, including full details of the rates and terms," adds Wolfe.

He continues: "Once we have that new programme and technology in place, we will begin taking steps toward introducing services such as support for baskets of loans for term financing, as well as non-cash loans, as part of the 'growing the base' phase of OCC's broader corporate strategy."

When it comes to 'innovating for the future' and expanding beyond its current boundaries, the clear target is engaging the buy-side, points out Wolfe. For buy-side firms, CCP securities lending creates potential for higher utilisation, lower costs, and improved pricing, he notes.

"The majority of buy-side firms' securities lending activities are facilitated by agent lenders, but banks are subject to capital requirements, as are the majority of borrowers," Wolfe says. "Clearing transactions through a CCP means that the regulatory capital requirements are typically about 95% less than uncleared bilateral transactions. Not only could that reduce the costs of agent lenders, it could also create potential for borrowers to be able to borrow greater amounts of securities or offer better pricing for the securities they are already borrowing."

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One question that emerges around the take-up of CCP securities lending among the buy-side is the impact it may have on the traditional role of agent lenders and indemnification.

Wolfe says: "Indemnification is a key risk management tool for almost all beneficial owners. Once you come into a clearing structure, many of the risk management features that we introduce make indemnification somewhat redundant, but I do not believe there will be a sudden decrease in the number of firms looking for indemnification from their agent lenders. However, OCC's credit rating and risk management framework could lower the cost of indemnification relative to existing counterparties."

As part of its efforts to widen access to its stock loan programmes, OCC has been designing a clearing framework that will suit the requirements of most market participants. "We have a lot of work to do around implementing new technology and working with regulators and the industry to bring that model to fruition," notes Wolfe. He goes on to explain that the organisation is working towards having the technology and framework in place that will enable agent lenders and beneficial owners to have better informed conversations about CCP lending and the OCC's role as a central counterparty.

He adds: "The core of what we do is stepping in and becoming the counterparty for lenders and borrowers, providing a guarantee of performance and mitigating the risk of loss because of failure by the original lender or borrower. That is not to say that there isn't an ongoing relationship between the borrower and lender, but this relationship exists against a much sounder foundation that is guaranteed by OCC. This enables market participants to engage with counterparties that they might not be comfortable dealing with on a bilateral basis and means that they may be willing to take much larger positions under the umbrella of protections that OCC provides."

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Modernising technology platforms and leveraging data tools

At the heart of the significant amount of work OCC is currently carrying out to achieve its goals for the future and complete the first step of 'reinforcing the foundation' lies the Renaissance Initiative. "The Renaissance Initiative is OCC's largest undertaking in at least 20 years," says Wolfe.

Announced in January 2019, this multi-year initiative will see OCC modernise its risk management, clearing, and data systems. In addition to the clearing system being developed with Nasdaq, new risk management features aim to deliver increased transparency for clearing members, while a new cloud-based data platform will be populated with at least 10 years' worth of historical data to allow for greater insight and intelligence capabilities for both OCC and its members. An extensive period of internal and external testing will take place to provide clearing members with the opportunity to ensure that their current systems will continue to operate alongside OCC's new systems and to try out the new features being introduced.

"The point of the Renaissance Initiative is to make sure we are delivering on what the industry needs. We are closely collaborating with our clearing members to understand what it is they need in the short term and also thinking about what we can do now to ensure we are addressing needs that may be unidentified, perhaps five or 10 years down the road," says Wolfe.

To support the introduction of its new systems, OCC is working with staff to develop their skills and enable them to leverage its new technology and tools. Wolfe adds: "We also have a team of process engineers who are going through OCC's processes and looking at ways to streamline them, introduce automation, and make them more efficient so we can better serve the users of our markets."

Beyond improvements to its own systems, Wolfe sees emerging technologies, such as smart contracts and distributed ledger technology, as creating opportunities for the industry to address some of the current pain points, namely, escalating costs, errors, and manual processing. "The immutability of changes to contracts with distributed ledger technology will reduce errors and reduce the amount of manual processing and the associated cost of reconciliation," he explains. "There are a lot of ways that technology could be employed in the industry that we haven't even envisioned yet." ■

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