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Beneficial Owners Guide 2021

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

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J.P. Morgan takes top prize globally in weighted and unweighted

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.

J.P. Morgan:
The US investment bank has taken top spot in both the unweighted and weighted categories, drawing on the highest global totals across the three regions of Asia Pacific, Americas and EMEA.

J.P. Morgan was rated 6.80 this year in the global average based on scores in the three regions, which is an improvement on last year's 6.69.

The bank's agent lender scored 20.41 in the global total category, which was up slightly on last year's 20.06.

The lender improved its score in Europe, the Middle

RESPONDENTS:

This year's survey was based on 89 responses from a range of asset-holding firms. Two thirds of these were asset managers or mutual funds, which was slightly down on their influence last year. The survey group also comprised public pension funds (16%), insurance companies (7%), private pension funds (5%) and central banks (5%).

Some 21 of the firms that responded had assets under management worth less than $25bn, 17 firms had asset worth between $25bn and $100bn and the largest group (51) had assets under management valued at more than $100bn.

When asked how many providers the respondents use, the majority (53) said they use only one provider while 22 used two, nine used three and the remaining five used four or more providers.

The respondents showed a differing appetite for lending. Some 22 firms said they had made available to lend less than $10bn of their assets, 29 companies had made available $10bn-$50bn, 21 were happy to lend $50bn-$100bn and 18 had made available more than $100bn of their assets.

In terms of the value of assets that are on loan at any given point in time, the numbers were much lower. Some 32 firms said the value of assets on loan at one time was less than $1bn, while 17 said it was $1bn-$2bn, 26 had $2bn-$10bn on loan and 13 had more than $10bn out at one time.

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.

> We are proud that our clients have recognized our efforts in providing them with a global, differentiated, value-added product and a first class service.
>
> **IBen Challice,** Global Head of Trading Services at J.P. Morgan

East and Africa (EMEA) to 6.95 in 2021 from 6.70 last year and boosted its score in the Americas to 6.46 from last year's 6.36.

J.P. Morgan had the highest unweighted score of its peer group in Americas and in Asia Pacific where the lender scored 7.00, which was flat on last year.

The lender also had the highest weighted total average of 6.38, which was slightly down on last year's 6.48. J.P. Morgan scored 5.97 in EMEA, which put the bank second behind Deutsche Agency Lending.

J. P. Morgan scored 6.76 in the Americas weighted list, which was up on last year's 6.50, and put the lender second this year behind eSecLending.

The bank scored 6.41 in the Asia Pacific weighted list, which made that firm the top-rated lender in that region, ahead of State Street, the only other lender to score in Asia Pacific.

J.P. Morgan was also the top-rated lender for Engagement on Corporate Actions, Relationship Management, Reporting Transparency and Risk Management.

Ben Challice, Global Head of Trading Services at J.P. Morgan, said: "During an unprecedented year for the industry and its people, clients needed reliability, flexibility and consistency from their custodial lenders. Our continual and long-term investment in our platform was key to our provision of these."

Challice added: "We are proud that our clients have recognized our efforts in providing them with a global, differentiated, value-added product and a first class service."

eSecLending:

The lending firm, which qualified in two regions, had the second highest average total in the unweighted category with 6.76, which was up from 6.49 last year.

eSeclending scored 6.75 in the EMEA unweighted category, which was behind J.P. Morgan only, and 6.77 in the Americas, which was up significantly from 6.02 last year.

The firm was the top-rated firm in the Americas weighted category with 7.04, which was an improvement from last year's 6.44. In the weighted section, eSecLending had a global total of 12.09, which was up on last year's 11.66.

Craig Starble, CEO of eSecLending, said: "As a specialist agent lender, we value the partnerships we have with our clients and are pleased that the results of coming in #1 on a weighted basis in the Americas reflect the success of our business working with many of the largest public pension funds and mutual fund companies in this region to deliver a superior securities lending service and performance."

> Everything we do is built and designed around our clients. Our clients set the bar high for us and push us to keep innovating.
>
> **Craig Starble,** CEO of eSecLending

ALL LENDERS (UNWEIGHTED)

COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Brown Brothers Harriman	6.32	**6.79**		13.11	6.56
Deutsche Agency Lending	6.55				
eSecLending	6.75	6.77		13.52	6.76
Goldman Sachs Agency Lending	6.59	6.76		13.35	6.68
JPMorgan	**6.95**	6.46	**7.00**	**20.41**	**6.80**
RBC Investor & Treasury Services	6.17	6.66		12.83	6.42
State Street	6.27	6.25	6.98	19.50	6.50

ALL LENDERS SERVICE CATEGORIES (UNWEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Brown Brothers Harriman	6.53	6.60	6.19	6.69
Deutsche Agency Lending	6.83		**6.83**	6.50
eSecLending	**6.89**	6.91	6.58	6.75
Goldman Sachs Agency Lending	6.77	6.80	6.47	**6.80**
JPMorgan	6.87	**6.94**	6.38	6.75
RBC Investor & Treasury Services	6.38		6.46	6.33
State Street	6.50	6.56	6.05	6.50

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Brown Brothers Harriman	6.60	6.43	6.50	6.75
Deutsche Agency Lending	6.83		6.67	6.50
eSecLending	6.64	6.73	**6.83**	**6.92**
Goldman Sachs Agency Lending	**6.93**	**6.83**	6.80	6.80
JPMorgan	6.81	6.62	6.81	6.75
RBC Investor & Treasury Services	6.54	6.13	6.33	6.31
State Street	6.53	6.22	6.35	6.65

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Brown Brothers Harriman	6.88	6.69	6.44	6.63
Deutsche Agency Lending	6.67	6.33	6.67	6.67
eSecLending	6.83	6.67	6.67	**6.75**
Goldman Sachs Agency Lending	6.87	6.53	6.47	6.47
JPMorgan	**6.94**	**6.75**	**6.88**	6.56
RBC Investor & Treasury Services	6.77	6.54	6.62	6.38
State Street	6.60	6.35	6.50	6.30

eSecLending scored an average of 6.05 in the weighted group, which was up from 5.83 last year.

The firm was also the top-rated lender for unweighted Collateral Management, Programme Customisation, and Settlement and Responsiveness.

The firm had the highest global average of 6.76 among the Third-Party Agent Lenders unweighted category based on scores in EMEA and the Americas.

eSecLending was the top-rated lender in EMEA among the Third-Party Agent Lenders on an unweighted basis with a score of 6.75 and second in the Americas among unweighted Third-Party Agent Lenders with 6.77.

Starble added: "We are equally as appreciative of our client relationships in EMEA that scored us #1 amongst Third-Party Agent Lenders on an unweighted basis. Having a targeted and highly sophisticated group of clients challenges us to exceed their expectations every day. Everything we do is built and designed around our clients. Our clients set the bar high for us and push us to keep innovating."

Goldman Sachs Agency Lending:

Goldman Sachs Agency Lending came third for the global averages behind J.P. Morgan and eSecLending with a score of 6.68, which was up on last year's unweighted score of 6.59.

ALL LENDERS (WEIGHTED)

COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Brown Brothers Harriman	5.06	6.37		11.43	5.72
Deutsche Agency Lending	**6.72**				
eSecLending	5.05	**7.04**		12.09	6.05
Goldman Sachs Agency Lending	5.74	6.55		12.29	6.15
JPMorgan	5.97	6.76	**6.41**	**19.14**	**6.38**
RBC Investor & Treasury Services	4.33	5.70		10.03	5.02
State Street	5.17	6.62	6.39	18.18	6.06

ALL LENDERS SERVICE CATEGORIES (WEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Brown Brothers Harriman	6.09	3.79	7.55	5.88
Deutsche Agency Lending	**7.06**		**9.20**	6.26
eSecLending	6.39	4.20	8.33	6.07
Goldman Sachs Agency Lending	6.66	4.21	8.37	6.33
JPMorgan	6.90	**4.38**	8.37	**6.38**
RBC Investor & Treasury Services	5.29		7.03	5.00
State Street	6.67	4.30	8.21	6.27

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Brown Brothers Harriman	3.19	1.69	4.96	3.22
Deutsche Agency Lending	**3.69**		5.53	3.40
eSecLending	3.38	1.89	5.37	3.38
Goldman Sachs Agency Lending	3.60	**1.90**	5.50	3.45
JPMorgan	3.58	1.83	**5.62**	**3.47**
RBC Investor & Treasury Services	2.81	1.54	4.35	2.66
State Street	3.46	1.81	5.34	3.45

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Brown Brothers Harriman	7.17	7.39	10.03	7.44
Deutsche Agency Lending	7.66	7.76	11.44	**8.28**
eSecLending	7.32	7.57	10.50	7.73
Goldman Sachs Agency Lending	7.66	7.69	10.54	7.70
JPMorgan	**7.90**	**8.12**	**11.57**	7.94
RBC Investor & Treasury Services	6.23	6.38	9.02	6.36
State Street	7.56	7.78	11.08	7.79

CUSTODIAL LENDERS (UNWEIGHTED)					
COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Brown Brothers Harriman	**6.32**	**6.77**		13.09	6.55
JPMorgan		6.49	**7.00**	13.49	**6.75**
RBC Investor & Treasury Services	6.17	6.66		12.83	6.42
State Street	6.27	6.25	6.98	**19.50**	6.50

CUSTODIAL LENDERS SERVICE CATEGORIES (UNWEIGHTED)				
COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Brown Brothers Harriman	6.50	6.58	6.15	6.62
JPMorgan	**6.91**	**6.92**	6.42	**6.75**
RBC Investor & Treasury Services	6.38	5.90	**6.46**	6.33
State Street	6.50	6.18	6.05	6.50
COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Brown Brothers Harriman	6.50	5.83	6.38	6.69
JPMorgan	**6.83**	6.18	**6.83**	**6.75**
RBC Investor & Treasury Services	6.54	5.44	6.33	6.31
State Street	6.53	**6.22**	6.35	6.65
COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Brown Brothers Harriman	6.85	6.62	6.31	6.62
JPMorgan	**6.92**	**6.75**	**6.92**	**6.75**
RBC Investor & Treasury Services	6.77	6.54	6.62	6.38
State Street	6.60	6.35	6.50	6.30

The US bank was third in Europe, the Middle East and Africa, with a score of 6.59, which flat on last year's total. Goldman Sachs Agency Lending was third in the Americas unweighted section, with a score of 6.76, which was an improvement on last year's 6.58.

Overall, Goldman Sachs Agency Lending's global total was 13.35 in the unweighted section, which was up on 13.18 last year. In the weighted section, Goldman Sachs Agency Lending had the second highest global average of 6.15, which was narrowly behind J.P. Morgan's 6.38 and a significant improvement on last year's 5.87.

Goldman Sachs Agency Lending scored 6.55 in the Americas weighted list, which was up heavily from last year's 6.09.

In Europe, the Middle East and Africa, Goldman Sachs Agency Lending scored 5.74, which was an improvement on last year's weighted score of 5.65.

Goldman Sachs Agency Lending's global total in the weighted section was 12.29, which was up from last year's 11.74.

Goldman Sachs Agency Lending scored well in the individual categories also. The US Group's lending arm was scored top for Lending Programme Parameter Management with an unweighted score of 6.80.

Goldman Sachs Agency Lending also scored highly in the unweighted regional coverage categories, with the top mark of 6.93 for Developed Market Coverage and 6.83 for Emerging Market Coverage.

Goldman Sachs was also top for Emerging Market Coverage in the weighted section with a top score of 1.90.

Among the Third-Party Agent Lenders service providers categories, Goldman Sachs Agency Lending was top in the Emerging Market Coverage unweighted section with a score of 6.82.

Goldman Sachs Agency Lending was also top in the weighted categories for Engagement on Corporate Actions, and Developed and Emerging Market Coverage.

Brown Brothers Harriman:

Brown Brothers Harriman was the fourth lender globally by the unweighted global averages with a score of 6.56, linked to a global total of 13.11.

Brown Brothers Harriman performed best in the Americas unweighted section where the US bank scored 6.79, narrowly ahead of eSecLending with 6.77.

Brown Brothers Harriman scored 6.32 in the unweighted table for Europe, the Middle East and Africa.

Brown Brothers Harriman scored 6.37 in the weighted

CUSTODIAL LENDERS (WEIGHTED)

COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Brown Brothers Harriman	5.06	6.42		11.48	5.74
JPMorgan		**6.72**	**6.41**	13.13	**6.57**
RBC Investor & Treasury Services	4.33	5.70		10.03	5.02
State Street	**5.17**	6.62	6.39	**18.18**	6.06

CUSTODIAL LENDERS SERVICE CATEGORIES (WEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Brown Brothers Harriman	5.96	3.73	7.40	5.75
JPMorgan	**7.00**	**4.42**	**8.50**	**6.46**
RBC Investor & Treasury Services	5.29	3.12	7.03	5.00
State Street	6.67	4.05	8.21	6.27

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Brown Brothers Harriman	3.10	1.51	4.81	3.15
JPMorgan	**3.64**	1.72	**5.71**	**3.51**
RBC Investor & Treasury Services	2.81	1.37	4.35	2.66
State Street	3.46	**1.81**	5.34	3.45

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Brown Brothers Harriman	7.05	7.20	9.72	7.34
JPMorgan	**7.97**	**8.22**	**11.80**	**8.29**
RBC Investor & Treasury Services	6.23	6.38	9.02	6.36
State Street	7.56	7.78	11.08	7.79

lists for the Americas and 5.06 in EMEA.

Brown Brothers Harriman was also top in the Americas and EMEA among the Custodial Lenders unweighted table where the US bank scored 6.77 and 6.32 respectively, and was second in the global averages behind J.P. Morgan.

Brown Brothers Harriman was top in the Americas Third-Party Agent Lenders unweighted category with a score of 6.97.

Brown Brothers Harriman was also top in the Third-Party Agent Lenders unweighted table for Lending Programme Parameter Management, Developed Market Coverage, Relationship Management, Reporting Transparency, Risk Management, and Settlement and Responsiveness.

Brown Brothers Harriman was also top in the weighted Third-Party Agent Lenders service categories for Lending Programme Parameter Management, Provision of Market and Regulatory Updates, Relationship Management and Reporting Transparency.

THIRD-PARTY AGENT LENDERS (UNWEIGHTED)

COMPANY	EMEA	AMERICAS	GLOBAL TOTAL	AVERAGE
Brown Brothers Harriman		**6.87**		
Deutsche Agency Lending	6.46			
eSecLending	**6.75**	6.77	**13.52**	**6.76**
Goldman Sachs Agency Lending	6.51	6.76	13.27	6.64

THIRD-PARTY AGENT LENDERS SERVICE CATEGORIES (UNWEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Brown Brothers Harriman	6.60	6.80	6.60	**7.00**
Deutsche Agency Lending	6.80		**6.80**	6.40
eSecLending	**6.89**	**6.91**	6.58	6.75
Goldman Sachs Agency Lending	6.75	6.79	6.43	6.79

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Brown Brothers Harriman	**7.00**	5.40	6.80	7.00
Deutsche Agency Lending	6.80		6.60	6.40
eSecLending	6.64	6.73	**6.83**	**6.92**
Goldman Sachs Agency Lending	6.92	**6.82**	6.79	6.79

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Brown Brothers Harriman	**7.00**	**6.80**	**6.80**	**6.80**
Deutsche Agency Lending	6.60	6.20	6.60	6.60
eSecLending	6.83	6.67	6.67	6.75
Goldman Sachs Agency Lending	6.86	6.50	6.43	6.43

> "It's great to see the high levels of satisfaction our clients enjoy from the lending program and we are committed to constantly improving the BBH experience."

Brown Brothers Harriman commented on the results: "Ranking first amongst custodial and non-custodial lenders is a strong validation of the investments we have made over time to provide an exemplary lending experience".

The bank added: "It's great to see the high levels of satisfaction our clients enjoy from the lending program and we are committed to constantly improving the BBH experience."

State Street:

State Street was the other lending firm to be ranked in all three regions, along with J.P. Morgan, and had the second highest global total in the unweighted category of 19.50, which was slightly up on last year's score of 19.48.

State Street was narrowly behind J.P. Morgan in the unweighted section for the Asia Pacific where State Street scored 6.98 versus J.P.Morgan's 7.00 and its own score of 6.92 last year.

The bank was also narrowly behind J.P. Morgan in the Asia Pacific weighted category, scoring 6.39 compared to 6.34 last year.

State Street had the top global total among the Custodial Lenders unweighted category, with a score of 19.50 across the three regions.

State Street also had the top score for EMEA and the top global total among the Custodial Lenders weighted section.

The bank said: "We're proud to be ranked No. 1 globally among Custodial Lenders and greatly value this recognition from our beneficial owner clients. State Street is committed to providing best-in-class services, leveraging our more than 40 years of securities lending expertise and sophisticated technology to create access and opportunity for clients."

State Street added: "We continue to innovate in this space and provide education on the advantages of securities lending, as well as the flexible options available to investment institutions today."

THIRD-PARTY AGENT LENDERS (WEIGHTED)

COMPANY	EMEA	AMERICAS	GLOBAL TOTAL	AVERAGE
Brown Brothers Harriman		6.39		
Deutsche Agency Lending	**6.81**			
eSecLending	5.05	**7.04**	12.09	6.05
Goldman Sachs Agency Lending	5.61	6.55	**12.16**	**6.08**

THIRD-PARTY AGENT LENDERS SERVICE CATEGORIES (WEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	ENGAGEMENT ON CORPORATE ACTIONS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Brown Brothers Harriman	6.53	4.15	8.51	**6.44**
Deutsche Agency Lending	**7.09**		**9.24**	6.22
eSecLending	6.39	**4.20**	8.33	6.07
Goldman Sachs Agency Lending	6.63	**4.20**	8.32	6.32

COMPANY	MARKET COVERAGE DM	MARKET COVERAGE EM	PROGRAMME CUSTOMISATION	PROVISION OF MARKET & REGULATORY UPDATES
Brown Brothers Harriman	3.57	1.51	5.44	**3.50**
Deutsche Agency Lending	3.71		**5.52**	3.38
eSecLending	3.38	**1.89**	5.37	3.38
Goldman Sachs Agency Lending	**3.60**	**1.89**	5.50	3.45

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS
Brown Brothers Harriman	**7.70**	**7.96**	11.08	8.02
Deutsche Agency Lending	7.66	7.68	**11.44**	**8.28**
eSecLending	7.32	7.57	10.50	7.73
Goldman Sachs Agency Lending	7.66	7.66	10.48	7.66

State Street was also voted the top Custodial Lender for Emerging Market Coverage in the weighted and unweighted sections.

RBC Investor & Treasury Services:

RBC Investor & Treasury Services scored a global unweighted average of 6.42, which is up on last year's 6.34 while the Canadian's bank global unweighted total was 12.83, an improvement on 2020's 12.67.

RBC Investor & Treasury Services had an unweighted score of 6.66 in the Americas, which was an increase on 6.44 last term.

The Canadian lender had an unweighted score in EMEA of 6.17, which was down slightly on last year's 6.23.

In the weighted section, RBC Investor & Treasury Services had a global average of 5.02, which was down on last year's 5.17, and a global total of 10.03, which was off on last year's 10.33.

The lender scored 5.70 in the weighted Americas section, which was up on 5.35 last year.

RBC Investor & Treasury Services had the highest rating among the Custodial Lenders in the unweighted Income Generated category, with a score of 6.46, beating J.P. Morgan into second place in that list.

Deutsche Agency Lending:

Deutsche Agency Lending was the top firm in the All Lenders (weighted) category with a score of 6.72, which easily beat J.P. Morgan into second with a score of 5.97. In the unweighted category, Deutsche Agency Lending scored 6.55 which was narrowly behind J.P. Morgan with 6.95.

In the All Lenders service categories (unweighted) Deutsche Agency Lending scored 6.83 in Collateral Management, narrowly behind eSecLending with 6.89. Deutsche Agency Lending won the Income Generated category (unweighted) category with a score of 6.83.

In the All Lenders (weighted) categories, Deutsche Agency Lending won the Collateral Management, Income Generated, Developed Market Coverage, and Settlement and Responsiveness categories.

Deutsche Agency Lending was the top EMEA weighted firm in the Third-Party Agent Lenders list with a score of 6.81. The Deutsche lending arm won the Income Generated section in the Third-Party Agent Lenders unweighted section with 6.80.

Deutsche Agency Lending also won the Collateral Management, Income Generated, Programme Customisation, Risk Management, and Settlement and Responsiveness categories in the Third-Party Agent Lenders (weighted) segment.

Deutsche Agency Lending said: "We appreciate the strength of the client testimonials that underpin our success in the EMEA region for the fourth year in succession. In a competitive marketplace, it is heartening to be rated the top agent in five of the twelve categories by some of the largest and most sophisticated institutional investors in the region."

Deutsche Agency Lending added: "In a year where the industry witnessed a significant contraction in revenues, we are delighted to be recognised for the delivery of enhanced performance outcomes. In achieving these results we are indebted to the continued willingness of our clients to work in consultation with our trading team to evaluate and commit to incremental revenue opportunities." ■

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 2021

Key beneficial owners in the world's largest lending market reflect on a tough year for lenders and the state of the business going into 2021.

CHAIR: Can you give us a bit of an overview of your experience of the last year and how you managed it?

NANCY ALLEN: Over the course of 2020 the average lendable was $22.2 trillion, and 85% of that was made up from collective investment vehicle, pension plan and government and sovereign agency assets. The average on-loan over the course of 2020 was $2.2 trillion, and again 85% were from those three beneficial owner types, but you will notice that the pension plans, while ranked second in lendable, represent the highest average on-loan value, whereas collective investments, ranked first from a lendable perspective, ranked third when looking at average on-loan value. This is primarily a result of the more restrictive guidelines that we see the collective investment vehicles have around their lending programs.

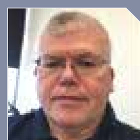
Lender-to-broker revenue, the most relevant to beneficial owners, was $7.66 billion in 2020, down 12% from 2019 and 23% from the nearly $10 billion post-crisis record high we achieved in 2018. Revenue was down across the Americas, EMEA and APAC as well as across both fixed income and equities.

I want to just put those numbers into context looking back over the end of 2018, into 2019 and across into 2020. The primary theme throughout 2020 is fee compression relative to 2019.

There are a lot of different trends that we saw during 2020. Over the first half of the year, declining market values in the cash markets led to lower on-loan balances in the lending markets. We saw short-selling bans implemented in Europe and Asia, which suppressed demand and resulted in general fee compression across the board. Meanwhile, in the Americas, in the first half we did see an uptick in fees; at one point, average fees were 22% higher year-over-year despite declining loan volumes. From a fixed income perspective, sovereign debt was up slightly in the first half of the year, primarily due to demand for high-quality liquid assets (HQLA) over the first quarter-end combined with lenders' need to raise cash as borrowers' collateral of choice flipped to non-cash. Corporate debt

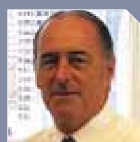
ATTENDEES:

Robert Goobie, HOOPP



Jerry May, OPERS

Justin Aldridge, Fidelity



Mike McAuley, BNY Mellon

Nancy Allen, DataLend

Cesco Squillacioti, State Street

George Rennick, JPMorgan

Oliver Wade, Chair

"Lender-to-broker revenue, the most relevant to beneficial owners, was $7.66 billion in 2020, down 12% from 2019 and 23% from the nearly $10 billion post-crisis record high we achieved in 2018."

Nancy Allen, DataLend

was down significantly, roughly 36% for the first half of the year. Two emergency Fed rate cuts resulted in an uptick in cash reinvestment revenue around the March timeframe.

As we entered Q3, the lending market became subdued with suppressed demand and compressed fees primarily due to the rising all-time record highs in the markets. As we moved from Q3 into Q4 we saw the return of special activities, specifically driven by SPACs and traditional IPOs. Moving into 2021, all eyes were on the retail investors, and specifically on GameStop.

Now I will focus in on a couple of these themes. As I mentioned, as COVID hit in March 2020 we saw some COVID winners and COVID losers, meaning some securities became less special as their security price soared, while others became special in the lending market as they were negatively impacted by the pandemic. Peloton, Fibre and Zoom are examples of COVID "winners." As the pandemic began, the share prices of these three securities skyrocketed, utilisation dropped significantly and the average combined fees went from 629 to 28 bps. American Airlines, Brookfield PPTY REIT and Nordstrom are examples of COVID "losers." Across these three collectively, average fees rose from 11 bps to over 1,000 bps.

As I mentioned, we experienced two emergency rate cuts in March, which resulted in higher than average cash reinvestment earnings Over the first half of the year, cash reinvestment revenue was up approximately 62%, and you can see that the beneficial owners that had more flexible cash guidelines were able to capitalise on the duration mismatch from the rate cuts. We saw that continue through July, and then as rates stabilised at very low levels, cash reinvestment revenue has tailed off.

The DataLend 50 is our proprietary index showing the cost to borrow for the top 50 most expensive securities on an index basis. Taking a look at the DL50 versus the S&P 500, we can see the special activity that occurred in Q2, followed by the lull in Q3 activity and then an uptick again towards the end of the year as we went into Q4 and 2021. As I mentioned, the activity that we saw in Q3/Q4 represented the significant amount of revenue and special activity around SPACs and traditional IPOs; of the top 25 earning securities in Q4, eight of those were either SPACs, traditional IPOs or a direct listing.

Finally, when we compare the top earners in 2020 versus 2019, we see the impact of the declining specials and fee compression: the 2020 top five earned $482 million versus $621 million in 2019. Match Group was the top earner in 2020, driving $124 million in revenue.

CHAIR: Rob, do you want to give us a bit of an overview of your experience of the last year and how you managed it?

ROBERT GOOBIE: March 2020, when the pandemic struck, was challenging for the entire market. In response to the pandemic, we turned to securities lending to raise some cash to meet our short-term requirements. Our priority at the time was to make sure we had enough liquidity and to protect the assets we were holding.

The second quarter slowed down significantly, but we were making small trades just to keep the business flowing and to remain active in the market. This continued up until Q4, when we witnessed a significant uptick in activity, which allowed us to borrow high-quality liquid assets and engage in the repo space, where we were able to generate a significant amount of spread income and end the year on a high.

CHAIR: How crucial has maintaining the relationship between agent lenders and beneficial owners been during the pandemic?

CESCO SQUILLACIOTI: Last year volatility in the first quarter made things a bit dicey going, though it levelled off

"I think given everything that happened in the market with volatility, emergency rate cuts, and everyone transitioning to working remote there are several positive takeaways over the last 12 months."

Justin Aldridge, Fidelity

fairly quickly. I think on the client side we were concerned about clients looking at what was going on and hitting the pause button on lending, along the lines of what took place in 2008/2009. That didn't happen, and we were very happy about that.

To your question, it was really a lot of communication - made a bit more difficult by having to do it remotely, but I think we just made an extra effort to get out individually to clients. We held global client calls and seminars and pull in as many subject matter experts as we could to talk through what we were doing, what we were seeing. Again, really the good news was it was pretty boring. It was choppy, it was volatile, but everything was working. There were some moments when it could have been a little bit better, but we didn't have any issues, and nothing that impacted our clients.

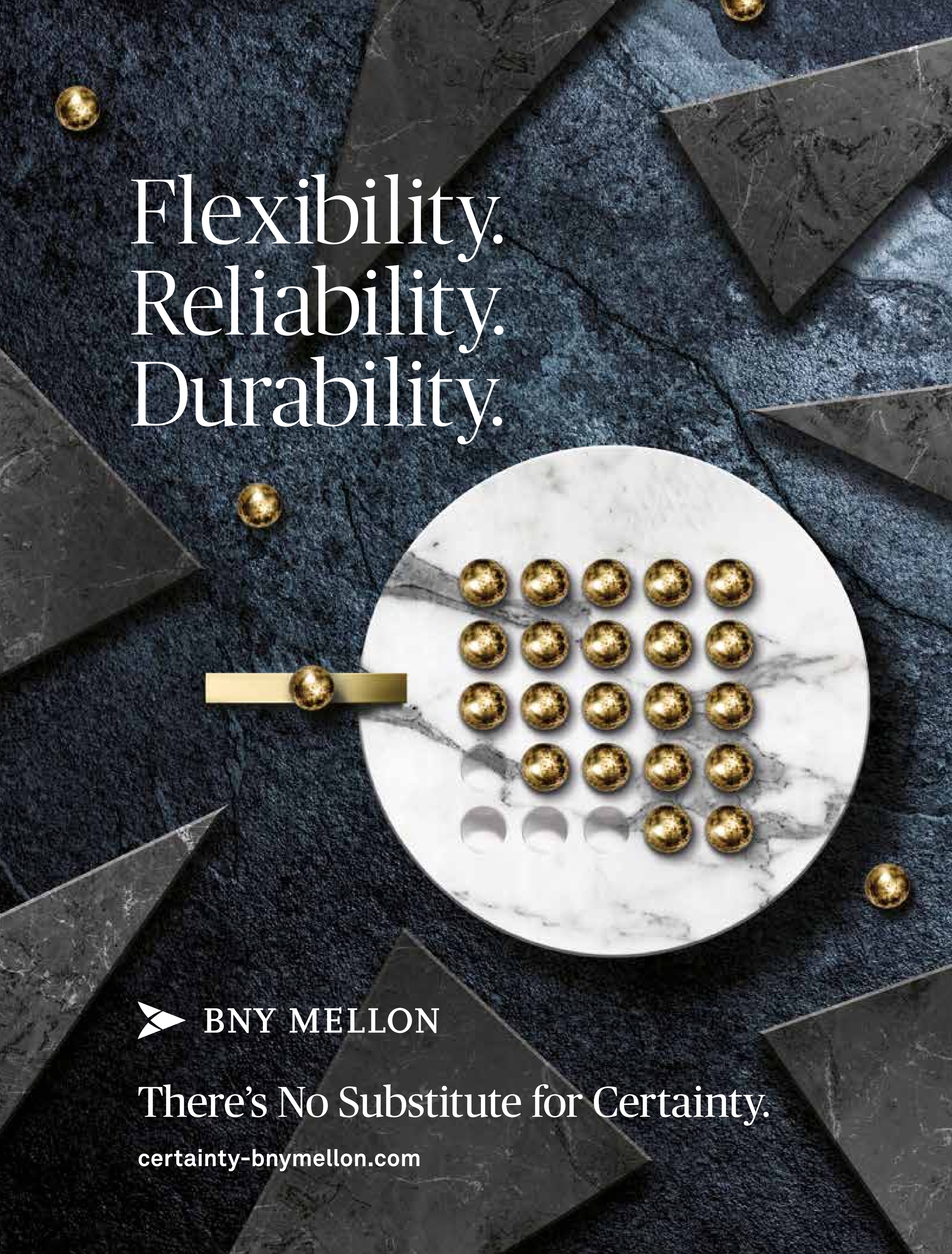
We got back to a fairly normal footing in June/July, clients got back into what they were doing. Given what was going on, it was perhaps a little bit more difficult for them to pursue expansion of lending programs initially and operating remotely made it a bit more difficult for some of the prospect discussions we'd had to keep going, but again, as we got deeper into the summer, things picked up and we were able to move forward. I think on the client side we actually had quite a good year in terms of expansion, especially under the circumstances.

Going into the fourth quarter things really picked up, there were some nice specials, it gave us a little bit of the tailwind into 2021, and I think the story was quite good. So, I think it was a fairly good year. We're pretty optimistic about this year, certainly it's shaped up so far through the first quarter to be a pretty good one, so we hope that that continues.

CHAIR: Justin, how has Fidelity fared over the last year given that you took your programme in-house shortly before we entered this crisis?

JUSTIN ALDRIDGE: The last 12 months were a great test for us and the markets. We took our affiliates' lending program in-house in 2019, so having to live through a major shock to the market as an agent lender early on was a welcome challenge to go through and we were able to successfully navigate it without any issues. The communications with our clients were robust and frequent and we stayed the course. Our clients run conservative lending programs, so there was no need to make any drastic changes, and quite frankly we kept moving forward with our original development plans. We launched the program in multiple phases, starting with the US equity business, and during the pandemic we launched our fixed income and international lending programs. Everything has gone as planned and we have exceeded our own lofty expectations while working 100% remote.

I think for everyone involved, 2020 should be considered a success despite the industry's overall revenue being down year over year. I think given everything that happened in the market with volatility, emergency rate cuts, and everyone transitioning to working remote there are several positive takeaways over the last 12 months. The industry didn't suffer any major issues with cash reinvestments or any notable counterparty defaults during this period of high volatility. The industry proved to be very resilient and you saw fully automated trading volumes really pick up street wide which was very welcome from our perspective. Equilend, which is a partner and service provider for many of us handled the increased trading volume flawlessly during this time-period. I think we're all going to look back at this year and say we're in a better place going forward because of the experiences we had in 2020.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> "Remember, the agent is only receiving a small percentage of the revenue from the trade compared to the current FICC program where the sponsor earns the entire spread between the two trades. Add to the default fund contribution the clearing and trade submitter fees and it gets really tough to justify the economics. "
>
> Mike McAuley, BNY Mellon

CHAIR: The NSCC is rolling out its securities finance transaction clearing service at the back end of this year, how crucial is this for the market?

MIKE MCAULEY: What the NSCC is working on is really two different models. One is a model very similar to the current FICC product. The second is an agent model that is more of a derivatives clearing-type model.

I think the adoption of the NSCC product will take some time, and initially, I would expect to see uptake of the FICC-like product, in effect, extending the existing structure to the equity asset class. Adoption of the agent model is going to depend on the economics. If you think about the equity volatility that we have had this year, the lending agent could be looking at a default fund contribution of 10% to 20% of the notional trade amount. That compares to 1% -2% in the current FICC model. Remember, the agent is only receiving a small percentage of the revenue from the trade compared to the current FICC program where the sponsor earns the entire spread between the two trades. Add to the default fund contribution the clearing and trade submitter fees and it gets really tough to justify the economics.

Now, there may be innovative ways to address the economics of the agent model, such as leaving some of the cash collateral as a default fund contribution, but that raises questions about how that portion of the cash is treated from a capital perspective. There is also the possibility of having the borrower act as the client's clearing agent. It is likely the cost of that to the borrower will be reflected in the pricing. Additionally, some of the costs could be passed on to the beneficial owners either directly or through a different fee split arrangement for cleared trades, but that may be a tough sell.

While I think we will see some uptake in the back-to-back model for some transactions, I think the agent model has some issues for the agents and the beneficial owners that will need to be worked out as we move forward.

JUSTIN ALDRIDGE: It's fair to say that not all participants will benefit equally by using a CCP. Folks are predicting that client returns and utilization could improve by using a CCP but that's not proven yet. I think a recent example of this model not working is a large lending CCP that shut down earlier this year due to a lack of interest. I think that's a real-life example of the model not working and it's because it didn't benefit or meet the needs of all market participants.

Clients like the benefits that they're getting today with the intermediation provided by their agents and the economics are in their favor without a CCP. Pricing for clients has evolved from 75% to 90% of the economics going to them. As it currently stands, these economics are extremely challenging for the service providers to support their lending via a CCP. Do hypothetical improved returns and utilization warrant a pricing change? From what I'm seeing, the borrowers aren't necessarily out there pounding the table insisting that we provide this to them and they're the main beneficiaries from a balance sheet perspective.

MIKE MCAULEY: Agreed. The agent is guaranteeing the performance of the underlying clients to the CCP so regardless of whether or not you indemnify the client, there are no capital savings for the agent. For the client, it becomes another potential distribution channel to improve utilisation.

JUSTIN ALDRIDGE: I think it's fair to say that everyone would embrace a CCP if the economics and overall benefits

"Quite honestly, looking at it from an agent lender lens, I don't see a first mover advantage on that product, a heavily commoditised product where often price and stability dictate what flow is going to go through the supply."

George Rennick, JPMorgan

made sense. Everyone sees the virtues in it but it's just not there out of the gate, so it won't likely have a dramatic impact in Q3 of this year.

MIKE MCAULEY: We were the only agent lender utilising the Eurex platform. We were surprised that there was not more uptake because it was a very good model for beneficial owners, given that there was no default fund contribution, no margin, and no cost to the beneficial owner other than some minor fees. Furthermore, there was a premium for the cleared transactions, and that is an important point: in the NSCC model, what we are hearing is that the demand side is unlikely to offer a premium for cleared transactions that could improve the economics.

GEORGE RENNICK: I think on the NSCC side everybody came to the table initially in some of the discussions, so all of the agent lenders, all of the main borrowers, and we certainly all worked, and we continue to work through the working group. It does feel like it's a natural evolution, but I think it will just be a route to market for a small portion of the US equity market. Quite honestly, looking at it from an agent lender lens, I don't see a first mover advantage on that product, a heavily commoditised product where often price and stability dictate what flow is going to go through the supply. If one competitor was to come out six months earlier than ourselves, six months later when we come out, we think we'll just be right back to where we were. I think every borrower would have to prioritise the technology build, they'd most likely weigh that against a change in 15c3, which one would give them the better benefit, if you're talking about the US broker-dealer side. So for us, we're part of the working groups, and I think it will be an evolution but there are a lot of gaps in the model, and the funding concept becomes much more expensive for the lender as an agent.

ROBERT GOOBIE: Personally, while I do think there is a space for central clearing in the market, I prefer to speak with my agent lender directly to leverage our relationship.

CHAIR: I suppose it begs the question, is it the right time to introduce a service such as this?

MIKE MCAULEY: I think as an industry we should move forward. In my view, clearing represents one of the main ways for our industry to grow and add capacity. That is needed. It may not be the perfect model, but if we can collaborate and work through some of the issues, it's definitely something that I think the industry should come together on.

GEORGE RENNICK: I also think that CCPs help level the playing field for certain client segments. By regulation, and you could go across a number of regulations, whether they be the capital regime regulations or whether it be other things coming out from ESG components, you do create have and have-not scenarios, and so the CCP model can certainly help those that are disadvantaged from an RWA perspective versus those that are advantaged.

JUSTIN ALDRIDGE: I think George said it best earlier, it's going to be an evolution, and Mike's right too, we need to start somewhere, so I think everyone is a supporter of the CCP model. It just needs to be refined and updated to meet the needs of the entire eco system including beneficial owners, agent lenders and borrowers.

CHAIR: Do we see the trend of non-cash collateral continuing?

NANCY ALLEN: I focused in on North America because that's really where we saw the biggest switch from cash to non-cash, or the growth in non-cash collateral. Non-cash balances grew from less than $800 billion up to a little over a trillion in balances as we moved through the year-end. A key driver of that growth was demand for HQLA, and specifically U.S. Treasuries versus non-cash as the rising

In terms of the overall make-up of our programme the cash returns just significantly outweigh any returns that we see from non-cash lending right now.

Jerry May, OPERS

equity markets meant that borrowers were looking to upgrade to HQLA and move equities off the book.

CESCO SQUILLACIOTI: Our programme flipped from predominantly cash to predominantly non-cash about two years ago, maybe a little bit before that, so in terms of a trend I guess we're viewing it more as foundational to how the business is run right now. It would seem like there's nothing really out there that would change it back, in fact it seems like it would only grow in usage. Things like NSFR coming down the pipe later this year certainly would seem to add to things like that, and then a change of 15c3 would seem to add a lot more to it. So, it's going to drive us to figure out different types of collateral to use and making sure that there are a lot of efficiencies in being able to manage it and monitor it, but non-cash collateral is here and it's been here, and it doesn't seem like it's going change any time soon.

CHAIR: Jerry, from your perspective is this a welcomed move? How are you guys operating in respect to the collateral process at the moment?

JERRY MAY: Well, our programme perhaps is a little different than most. We would probably be 95% cash with no real plans to materially change that. At this point cash for us provides a better return than non-cash lending. We do a little bit of non-cash, peer-to-peer we do a little bit of non-cash, but in terms of the overall make-up of our programme the cash returns just significantly outweigh any returns that we see from non-cash lending right now.

ROBERT GOOBIE: At HOOPP, we borrow and lend securities. When I'm borrowing, I prefer to pledge non-cash collateral and I'd like to pledge equities as I believe they provide much more flexibility, particularly in terms of HQLA. I'm excited to see how the market develops and the opportunities that equities as collateral provide. Cash collateral also possesses significant levels of cash reinvestment risk, in the sense that you are unaware of who is reinvesting the cash and what levels they are receiving.

The one disadvantage of equities as collateral is the need to go through a tri-party provider, which can prove to be costly for some.

MIKE MCAULEY: We've been working to try and effect that change for a number of years. I think, as George said, for CCPs this process will be an evolution. What we expect to see is limited to loans of equities - so equity collateral only for loans of equity securities. Trades such as Treasuries for equities will not be covered by the expected expansion of the rule.

JUSTIN ALDRIDGE: Borrowers are already very efficient in managing their collateral, while it would open up the toolbox for them on the US side, they're already borrowing massive amounts of securities versus equities today. So, maybe some of the activity comes onshore? That could be a benefit, but it's not going to be a game changer out of the gate where all of a sudden, the cash market is going to dissolve and folks aren't going to borrow versus anything other than non-cash. It's not going to change dramatically in the short term but likely very impactful long term.

MIKE MCAULEY: Again, it really depends on each dealer's funding profile and they're specific needs. To Rob's point, equity is a very liquid, good form of collateral, but we've got to take this first step, and if we can expand on that progress in the future, that will put us on a more level playing field with the rest of the world. From an agent's perspective, having equity collateral helps us manage regulatory requirements like SCCL and that helps create more capacity.

JUSTIN ALDRIDGE: One thing that I want to say on that point, it goes back to Nancy's graph showing on-loan percentages versus the availability provided to the market: as equities become acceptable collateral you're going to see an increase in the disparity of on loan utilization of pension and government plans versus collective investment vehicles. Given that mutual funds and collective trusts won't be able to take equities as collateral out of the gate. If the eligibility is approved for 15c3-3, the collective investment vehicles will likely need no-action relief and board approvals which could take a considerable amount of time.

I think it will get there. If it becomes acceptable for 15c3-3 then I think ultimately it will become acceptable for collective investment vehicles, but that's a long process. Given we just had an administration change it's going to be hard to try to get something approved quickly in the near term.

GEORGE RENNICK: Even after it gets approved from an exemptive relief standpoint, that might be a period of year to a couple of years, every individual complex is going to need to take it to their individual boards, so you're looking at a period of multiple years most likely before the trend really takes off. The pensions are very well-positioned, as are the sovereign wealth funds, for the future.

When I'm borrowing, I prefer to pledge non-cash collateral and I'd like to pledge equities as I believe they provide much more flexibility, particularly in terms of HQLA.

Robert Goobie, HOOPP

CHAIR: What lessons have the US market learned from the introduction of the Securities Financing Transactions Regulation in the US?

NANCY ALLEN: From my perspective, SFTR has been a huge step forward for the market as a whole. Historically, data was held in all different systems that were not compatible; that issue was solved, and now many different data points that are important to the overall lifecycle management of the trade can be more easily assimilated. SFTR has forced the market to take a big step forward when it comes to transparency and when it comes to streamlining processes. That work can be used from a data perspective to bring more transparency, better benchmarking, better performance measurement and more robust metrics around the securities finance marketplace.

MIKE MCAULEY: I would agree with Nancy on that. To her point, SFTR has driven the goal of standardisation, increased the amount of work being done to standardize industry terms, and probably directly led to things like the common domain model work that's going on in the industry as well.

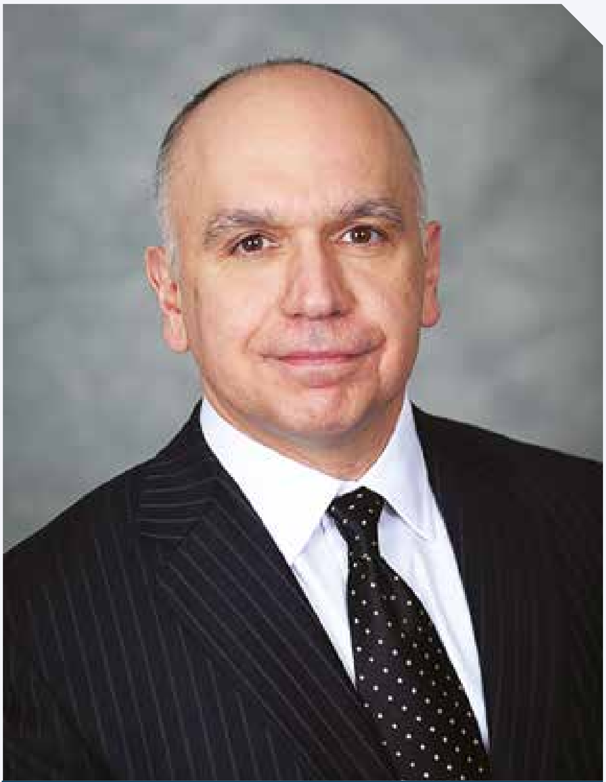
CHAIR: In October 2020, we saw buy-side firms across Europe come into scope of the regulation. How would the introduction of a similar regime across the US impact beneficial owners?

JERRY MAY: From an operational standpoint, it's likely not going to be very significant for us. The agent would be involved providing the information… Transparency is great, and we're for it, but from our perspective we don't see it as a big driver of activity on our side.

CHAIR: How did the market respond to January's incident involving GameStop?

NANCY ALLEN: It was an exciting January for all of us. What I've outlined here is some of the names we saw targeted by retail investors. GameStop was obviously number one, followed by AMC. If you look at that revenue across January and February, GameStop generated $39 million for beneficial owners. Looking at some of the stats around utilisation, we can definitely see where the shorts were coming off and utilisation dropped from 99% to 73%.

Then we took a deeper dive, tracking the total quantity of lendable shares versus the quantity on loan versus the price per share. On the left you see we have GameStop, and what's interesting is, when you see that significant price increase we saw a decline in lendable quantity and on-loan



On the client side we didn't see a lot of clients restricting or making changes in reaction to the press around GameStop. There were a lot of questions, and we had a lot of phone calls around what was going on to try to explain it.

Cesco Squillacioti, State Street

quantity at the same time, so whether that's a profit-taking by the long holders or perhaps restrictions in lending programmes, that was an interesting data point.

We didn't see the same with AMC: a little bit of a decline in lendable and on-loan as we hit the spike, but then the quantity on loan and the lendable continued to increase after we saw that decline in price.

GEORGE RENNICK: History tends to repeat itself, but the difference between the chat rooms of 1999 or Yahoo Finance in 2007/2008, is that now people can get on an iPhone during a COVID environment, and so there is the gamification of retail investing. I'm hoping that that's where the regulators will focus, because that is a serious concern. I'm in the camp of this won't end well for most individuals. I'm almost reminded of futures investing when they say retail investors and futures end in tears, so I think that this won't end well. I just hope that they focus in the right places.

Mike and I, sitting on the RMA committee, have talked recently about the DTCC coming out and potentially moving to a T+1 settlement and then just throwing out there that everyone can do this by 2023. Well, everyone of our organisations have adapted around the globe to shorten settlement cycles, I've been here in the US when we were longer in T+5 and T+3… Yes we can do it, it's not as simple as DTCC made it sound and it will become a huge distraction in our industry. I think that would be one of my concerning pieces coming out, that I want to make sure we focus in the right place as an industry, and I think that should be around suitability for retail investors.

MIKE MCAULEY: I would agree with George. I think if you look at the House Financial Services Committee hearing on February 18th, they really focused on several topics. One was short selling, but really I think the main focus was on the role of the broker, and payment for order flow, and on trading restrictions. I expect that any regulation will likely be focused more on the disclosures around trading agreements and the role of broker dealers. I thought one of the most telling questions was when one of the senators asked the Robinhood CEO if they had liquidity to make their margin call, and they answered no, so you can see a potential focus on increased capital requirements for dealers. Of course, there were mentions of securities lending and short selling which brought up some of the same issues that most of us on the panel today have spent a good part of their careers addressing all while explaining the importance of these activities to market liquidity and price discovery.

JUSTIN ALDRIDGE: It appears that the securities lending markets worked as designed. The regulations that had been put in previously to prevent naked short selling are working, so I don't think that there's much more regulation that's needed on that front. For whatever reason in the media, it's being portrayed that short selling is bad and securities lending was the issue here, and as George said it's not necessarily the case. I think what's getting lost in the news stories is that everyday investors in mutual funds and pensions are the main beneficiaries of securities lending income.

CESCO SQUILLACIOTI: On the client side we didn't see a lot of clients restricting or making changes in reaction to the press around GameStop. There were a lot of questions, and we had a lot of phone calls around what was going on to try to explain it. It did lead to some questions around short selling. There were some high-profile cases in Australia over the past two weeks of some of the larger superfunds stepping away from lending, and that market since 2008 and really before has been a hotspot for being very sensitive to short selling and things like that. Hopefully, this is a short-lived incident; it could probably

> "Moving to a one day settlement cycle could result in the number of fails rising significantly, which could prove challenging for some market participants."
>
> **Robert Goobie,** HOOPP

happen again in the short term but I don't see it as something that becomes a systemic problem for securities lending. To George's point, if there's regulation put in place hopefully that addresses it, but we don't see this as becoming a major factor going forward.

JUSTIN ALDRIDGE: But it's certainly having an impact. North America equity special balances month-over-month are down 50%. When will the demand-side get comfortable again? What are they going to do to protect themselves from this happening again? There are some short-term effects from a financing perspective that are negatively impacting beneficial owner returns with lower demand for the foreseeable future.

GEORGE RENNICK: I think that's where you'll see it, because hedge funds have for the most part gone to the sidelines from crowded trades. Now, they're in the middle of a sector rotation anyway, into certain names, but they've gone to the sidelines. The question is, for how long, and at what point can the spotlight come off this so that they can go back to normal? I think long term no major damage to the lending side of the business; short term, if we do this a quarter from now Nancy's going to show us a big chart of a dip in revenues and specials for the past few weeks, and probably the next three.

CHAIR: Rob, speaking as a buy-side member what's your take on the GameStop affair?

ROBERT GOOBIE: Like other panellists have highlighted, the securities lending market did what it was supposed to do in January. Securities lending serves as a liquidity management tool and, while it was magnified in January, it was an isolated event. The market still recognises the importance and the benefits of short selling, especially now that ESG is coming to fore.

CHAIR: What is the panel's stance on DTCC's proposal to move to a T+1 settlement cycle?

GEORGE RENNICK: I think there are trade-offs, and we've evaluated that. When we went from T3 we evaluated T1 or T2 settlements and came to an industry decision that T2 was the right settlement timeframe for that time. It's inevitable that will move to T1 but there are trade-offs, and so Robinhood still would have faced margin calls with a T1 settlement and may not have been able to meet those margin calls.

ROBERT GOOBIE: There are benefits to moving to a T+1 settlement cycle, but there are also disadvantages, particularly during times of crises, as the additional days allow you time to gather additional liquidity if necessary.

Moving to a one day settlement cycle could result in the number of fails rising significantly, which could prove challenging for some market participants. The current T+2 settlement cycle allows firms ample time to locate a hard to borrow stock, which will be more challenging in a T+1 environment.

NANCY ALLEN: I think it will bring the post-trade life-cycle management really to the forefront and ensure matching as soon as possible in the process as opposed to having breaks after settlement or no settlement at all.

GEORGE RENNICK: Conceptually, institutional money is already financed at T+1, and so institutional margin calls go out on the morning of T+1 and generally are expected to be met same day, and usually closer to the earlier part of the day, and so while you can certainly argue that from a retail investor you can go to full settlement cycle plus extension periods, the institutions are already conceptually there.

CHAIR: Peer-to-peer lending has garnered attention from all corners of the world in the past twelve-months and we saw the formation of the GPFA last year. Why was the association formed and what are the benefits of peer-to-peer lending?

JERRY MAY: I think it was a foundational issue for the beneficial owners that took part in this. We saw a need for additional partners within the industry, I think we're all trying to work together to see what we could do together to increase liquidity for each other, to take advantage of trading opportunities that were presented, and to do it in a way that minimised the cost to each of us, so I think it's a really good thing.

We're focused on education within the industry, we're

> "Certainly, we see that peer-to-peer is going to be a bigger part of our programme going forward, and certainly with those two client bases on either end of the spectrum that we're working with it's becoming more and more important to them."

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trying to help others understand the process. There are things that we're involved in that are more than just peer-to-peer lending, although that was the foundation of how it started, we are very interested in just helping the population on the peer side to understand a lot about the lending market, to understand more about opportunities that are available, and because of that I think that it's very positive for the industry. We're not trying to cut out anybody, we're not trying to do things that are outside of the norms, we still have to work with agents, we still have to work with custodians, and because of that I think there are opportunities for growth across the entire spectrum of participants in the industry.

I think Rob can go into more detail on some of this, but from my perspective it's something that we are definitely involved in, we like it, we hope that it continues to grow. We've seen significant growth so far and we anticipate that it will continue, and we appreciate the opportunity to be engaged with our peers.

ROBERT GOOBIE: The GPFA is an association created by peers for peers, so the governance is slightly different. This is a situation where the association is buy-side for buy-side, and we think that is powerful and gives a voice and more control to beneficial owners as well as offering an excellent forum for knowledge sharing amongst peers.

At HOOPP, we think about peer to peer as a different route to market. If you think about the securities lending frontier, most start by lending through an agent lender and the revenue generated from the program often pays for custody. As you move up efficiency frontier and you get more in-depth, you might be thinking about talking to your custodian more and getting involved in your sec lending programme, or maybe start directing trades and being more selective about who you approve as a borrower or a lender and the collateral types used.

The next stage may be having multiple agent lenders. For some, another stage may be to bring lending in-house and deal on a bilateral basis with counterparts, but this requires infrastructure to support it.

For peer-to-peer, you can either directly trade through custodian banks or transact directly if you have that capability. We just saw State Street came out with a repo peer-to-peer platform, so I think it's another way to think about it as well.

When you start lending on a direct basis it will help with the liquidity. You have a different route to market, you get different liquidity and you can move it around and you can reinvest your asset, there's more liquidity coming back into the market, and we think that with the peer-to-peer business we could bring back more liquidity into the market.

As Jerry said, we started off with four members, now we have about 14, close to $6.5 trillion in combined AUM, and we are focusing on many different topics that our members care about like LIBOR reform from a buy-side perspective.

CHAIR: State Street has been very proactive in building out its peer-to-peer lending solutions. Cesco, why is there an area of priority for your firm?

CESCO SQUILLACIOTI: I think, as Rob mentioned, there are different constituents, there are different flavours of peer-to-peer. What we are working on at State Street is something that we call 'direct access lending.' We have a principal business where we look after hedge funds, we, of course,have the agency business, and what we tried to do was connect the two and make it a platform - we call it a 'managed peer-to-peer platform' - where from an agent lending client's point of view it looks exactly the same as it always does: it's indemnified, we do all the movement of collateral, we manage it the same way that we would a normal programme, but we give them access to additional demand in the hedge fund space.

On the hedge fund side of things, we made it such that contractually they're looking at a beneficial owner, but we're managing the whole process for them so they don't have to worry about the collateral or corporate actions or operational matters like that.

We would step in and manage it, so it takes away a little bit of the operational burden from them or some of the things that they would need to think about. In doing that, what we're trying to do is really optimise GC usage for both sides, make it attractive for the hedge fund client and give a little bit of a premium to the agent lender client. It's a little bit different obviously to the GPFA model, and again it's catering to the client bases that we do have and what we think that they're looking for, a direct connection of the two, a pension

> We welcome the opportunity to work with all market participants. Whether it's through our trading, post-trade or data product suites, it is always our objective to help bring the transparency, efficiency and connectivity to the marketplace.

Nancy Allen, DataLend

fund facing off to a hedge fund. I think there's appetite for it in certain instances, I think in a lot of cases they probably wouldn't want to do that, it would be something that would take a lot of explaining to boards and getting comfortable about that and interposing the indemnity in there I think adds a lot that process. So, we're looking to expand that right now, it's an equity for equity trade, expanding that out to different asset classes on either side of that I think is the main focus at the moment, so trying to grow the platform out that way. Certainly, we see that peer-to-peer is going to be a bigger part of our programme going forward, and certainly with those two client bases on either end of the spectrum that we're working with it's becoming more and more important to them.

CHAIR: Where does technology fit into this new working model?

NANCY ALLEN: Where we sit, we are here to provide connectivity to the marketplace, so we welcome the opportunity to work with all market participants. Whether it's through our trading, post-trade or data product suites, it is always our objective to help bring the transparency, efficiency and connectivity to the marketplace.

JUSTIN ALDRIDGE: For the client base that we support today, it's not necessarily an option. They're conservative and are running intrinsic lending programs and they're not necessarily looking to deal with non-rated entities. In my opinion, the peer-to-peer market is more focused on general collateral. I think this is another tool for agent lenders, hedge funds, and lending clients to get better utilisation and returns outside of the traditional markets, but I don't see this necessarily taking over the market per se or being a large percentage of the market, but it's going to be meaningful to the clients who are comfortable with it.

CESCO SQUILLACIOTI: I would agree with that, it's not going to be for everybody. I feel that it's really the asset owner space that's it's going to flourish in, certainly for now, especially where it's an equity for equity trade, it's a little bit tricky for parts of the client base to do that. We'll have to see how things develop, I don't think it will be the main part of the business, but it will be a growing and important part of it.

GEORGE RENNICK: We do have active solutions live today in that market, and we have it on what we call our alternative financing agenda, but we have central bank to central bank models, pension to hedge fund models, pension to pension models. To Rob's point around there's a heavy lift operationally and from a technology standpoint to be able to support this, and an agent lender can play that role, offering our capabilities from either of those standpoints. In addition, we are well-positioned with our indemnification, so that helps alleviate the concerns for those pensions that are reticent to give up the indemnification standpoint.

MIKE MCAULEY: I'd add that we have peer-to-peer solutions, and have had them for a number of years. We just consider them as additional distribution channels that our clients can access for increased revenue and utilisation across all asset classes. On the repo side, peer-to-peer solutions are just one step in what we refer to as our liquidity waterfall, which has six or seven liquidity options for clients.

CHAIR: How has the pandemic accelerated the ESG agenda?

ROBERT GOOBIE: From an ESG perspective, we've hired a Senior Director of Sustainable Investing and we have a new department for ESG, and that's in the last 18 months or so. We are doing the right thing from an ESG perspective. From an operation and trading perspective, we are implementing new approaches, whether that be our collateral schedules or lists of securities where we can go long or short. We are investing a lot in that space to formalise our compliance modules.

ESG for collateral management is still evolving; everybody is trying to be the leader in some way, because it has a lot of money and you can make a lot of money if you can get it right.

NANCY ALLEN: We're also working on compliance and collateral tools to help. We recognise that our clients right now are mostly in the process of defining their ESG

> One of the challenges we all have is that ESG is in a different life-cycle depending on part of the world, part of the client segment, part of the function, if you will.

George Rennick, JPMorgan

requirements around their securities lending, and we're working on putting those tools in place. We have some already, like our EquiLend Exposure product, which can help clients monitor collateral received and ensure they're adhering to the ESG guidelines. Within DataLend, we're looking at how we can help clients conduct performance measurement once they have those restrictions in place to ensure a like-for-like comparisons. At a corporate level, we are establishing our own ESG principles. In 2019, we created a Diversity & Inclusion Committee, we are now focusing on sustainability and we remain committed to our long-standing support of numerous charities around the globe. We are actively discussing what else we can do internally as an organisation and what we can do to help our clients manage their ESG principles.

GEORGE RENNICK: One of the challenges we all have is that ESG is in a different life-cycle depending on part of the world, part of the client segment, part of the function, if you will. At the moment there are over 100 ESG providers, so whether they be ESG scores or ESG metrics or ESG components, there are over 100 of them, and I'm staring at a slide right now here of all of the logos pictorially.

So, you're in a world where it's certainly front and centre, and it's heightened from the portfolio management selection to the other intersections with securities lending, which would be things around people have taken short selling to an extreme, proxy voting, collateral schedules, other different components, and you need to have a customised strategy almost at the client level, but realise that you can't have that many bespoke solutions and still get your programme out the door.

I think as an industry we'll keep working through that, we need to stay front and centre with it, and then there are even different ways and views of should we exclude collateral, and there are arguments to why, especially in certain markets and certain structures the answer is definitely yes. You hope you can move that way, but from an industry perspective we are all active in client discussions, industry bodies, trying to move to a best practice solution, and I think this will continue to evolve over time.

JUSTIN ALDRIDGE: I think it's fair to say there probably won't be mass standardisation, I think to George's point, everyone's going to have a different view on what ESG means to them. I think firms are going to be able to differentiate themselves from their peers based on how they view and service ESG. I think we're all going to be "put to task" with our product capabilities to make sure that we have technology in place to support the customization needed to support each client's individual ESG needs.

CESCO SQUILLACIOTI: I think it's a definitional problem at the moment. As Justin and George said, clients will have different views on what they want to do. My view is we need to start with a common denominator approach, thinking about the collateral side of things. The governance and proxy voting is fairly well nailed down from a securities lending standpoint, but looking at the collateral set, that's where things can get out of hand pretty quickly. So, we need to start with at least a common denominator approach, and hopefully it's broadly applicable to clients.

I think, to Nancy's point, it does come up a lot in RFPs. It comes up in client pitches that we have. Clients want to be able to express ESG in their securities lending programmes in some way. I also feel that many are trying to work-out what that is, so I think having that baseline set up for collateral will give a lot, maybe not all, clients something to work from. We've been working on different collateral solutions for both cash and non-cash and trying to get something in place. Applying ESG to securities lending is still developing. A lot of clients are still at the asking about it at this stage; a few are implementing things. It's a matter of where clients are in the timeline, but it's something that we have to work out as a n industry.

CHAIR: Jerry, what role has ESG played within your organisation?

JERRY MAY: Well, at this point we have begun an ESG portfolio internally on the investment side, so we're just getting started, that was in 2020 endeavour, so as everyone's mentioned, we're very early in the process. The impact on securities lending I think is something that at this point we're watching. We don't want to make decisions without having some data, and that data at this point is not yet available, at least the data that would be needed to move a large portfolio like ours. We just want to be able to say that we're basing our decisions on some sound information rather than just freewheeling out there. ■

Accuracy at speed

Matthew Wolfe, Executive Director for securities finance at OCC, explains how recent high volumes highlights the benefits of automation and shares that he looks forward to how messaging standardisation and ultimately blockchain technology could reduce costs and increase efficiencies for securities finance participants.

GI/ ISF: How has last year's volatility affected securities lending in 2021?

Last year's remarkable surge in options volumes has continued into 2021. On 15 January 2021 after nearly 48 years, we saw 50 million options contracts traded in a single day for the first time in history. Less than two weeks later, daily volume had surpassed 60 million. January contract volumes were up 61% over the prior year, while February was up 45%. Stock loan balances have increased at the same pace as options, from an average of $75bn (£55bn) notional value in 2020 to $120bn in March 2021.

Why has activity continued to climb well after the high volatility of spring 2020? It may partly come down to higher US market valuations: these account for 8% or 9% of the increase. Much of the increase in securities lending activity and balances can be attributed to the greater volatility of trading in equity and options markets, meaning there may be a higher level of borrowing and lending required to hedge positions. We're in the longest bull market in history. A lot of people anticipate that valuations will fall, and inflation will pick up, so on the short side there is an increased demand for borrowing.

GI/ ISF: What have higher volumes revealed about the benefits of automation?

The higher volume of trading over the last year has increased the operational strain on participants. But the pressure has been concentrated on those whose levels of automation were low. Taking the options market as an example, it's a regular practice that one firm will execute the trade for a client before giving it up to another firm that carries the position for the same client. It's obviously very important that those trades are given up accurately and quickly.

If a firm doesn't have certain levels of automation – for example, being able to quickly identify the customer so they know where to direct the trade clearing – it will need to reach out to the client to get the information, slowing down the process. This becomes critically important when trades are occurring right before the expiration date, which is when we see higher volumes of activity. For firms that lack automation, you can see cases where trades are directed to the wrong account or stay in the executing broker's account for longer than they should. By contrast, firms with high levels of automation have the ability to carry out the required processes more quickly and accurately.

In the securities lending space, there is greater pressure because of the increased volume of transactions and the larger size of the positions, which can cause a larger number of discrepancies to be reconciled every day. Firms that are good at accurately marking and maintaining books in synch with their counterparties have a much easier time managing these greater volumes. Firms with lower levels of automation have more breaks and must spend more time reconciling them.

GI/ ISF: Why is messaging standardisation important, and what progress is being made here?

Cost is important for lenders and the borrowing side as well. Borrowers need to make sure that the locates they believe they have are actually in place. If lenders are not able to efficiently update the lendable inventories being shown on multiple platforms, then this can lead to overcommitting shares to multiple borrowers. If the industry wants to avoid sharp increases in fails to deliver at times of high volatility, there should be growing engagement to develop communications standards within the industry. In time, the hope is that participants will be able to send a single message format to all platforms, providing a common way to update inventory when locates occur to negotiate a re-rate, and so on.

In the past there has been much talk about developing a standard messaging format. But it has never materialised for securities lending in the way it has for equities, listed derivatives or many of the swaps markets, which have embraced standards like FIX or FpML. My hope is that because of the increased volumes we have seen recently and the resulting reconciliation burdens, the industry is incentivised to pursue this direction.

GI/ ISF: How will messaging standardisation facilitate the development of new platforms?

We have seen several new trading platforms popping up in recent years. The lack of standards makes it very hard for these innovators to succeed. The problem is that the initial build out cost is still high: each platform has a custom specification that must be coded for, so it's hard for new trading platforms to get the critical mass they need to create the liquid, efficient market that will attract more users. Some of these new markets could really benefit lenders and borrowers. But until they have significant supply and demand from the buy and sell side, it doesn't matter how cool or innovative the trading platform is – they will struggle to reach this critical mass. In this way, a lack of messaging standards really stifles innovation by making it so challenging to connect to new platforms, which ultimately increases costs across the industry.

GI/ ISF: What other benefits come from greater automation?

Consider the benefits accruing from more accurate information. In the current set-up, information is typically sent in a different bespoke messaging format to each platform. The rebate rate might be stated in basis points on one platform and per cent on another; on one platform the rebate rate field might be labelled 'interest rate', on another simply 'rebate'. With standardisation there is less room for the misunderstanding and errors that this ambivalence creates. Instead, there is greater certainty: a common understanding of what should be captured and how it should be represented. Inevitably, standardisation leads to greater accuracy.

> "With standardisation there is less room for the misunderstanding and errors that this ambivalence creates."

You can see how firms that are less automated are limited in the number of platforms they can trade on, which for lenders either means they aren't optimising their utilisation or they face a negative impact on price because fewer users are competing for their inventory. Conversely, if they try to connect to multiple markets without automation, there is a higher likelihood that information may not be accurately captured. The result is that the daily reconciliation process gets harder: you have far more breaks when information does not match across the two counterparties. That means more manual intervention is required, requiring more staff in the back office – a cost centre – and fewer in the front office – a profit centre.

Systems supporting reconciliation are another area where there is not a lot of standardisation. To the extent that the two counterparties are using different back office vendors or proprietary systems, it's harder to compare positions against each other – as in the case where one counterparty has entered basis points and the other a percentage value. Once again, this means a whole bunch of staff need to review these breaks, and there is a greater likelihood that breaks will be missed.

GI/ ISF: How could the blockchain tie in with more standardised messaging to increase automation and reduce technology costs in the future?

Distributed ledger technology has the potential to transform securities lending, achieving unparalleled levels of standardisation. The real-time dimension of the distributed ledger is important, too. Instead of comparing contracts on a nightly basis and fixing problems the following day, a real-time route lets you catch mistakes immediately.

As well as lowering the cost of automation, blockchain supports an easy migration from existing standards. Different participants can choose their level of engagement: communication to the system can be done using FIX messages or by transitioning to adopting a node. Any time there is a change to information on the ledger that applies to you, you can choose how to be updated about it, depending on the protocol that you prefer.

If you adopt the more advanced route – employing your own direct node on the network – then you can simply read changes directly off the ledger or have them automatically fed into your systems. That dispenses with the need to push messages out to users of a platform in the current approach, where every participant must develop their own system for parsing the data in that message, applying validations, and then updating their books and records. DLT nodes build on the benefits of a standardised messaging format: updates are pushed directly to you, and you can specify every system or participant on your network with whom you want that information shared.

Ultimately, it could let participants skip a huge amount of processing and validation work. With all validations getting consistently applied, everyone is now sharing the same process for booking a new loan, confirming a locate, applying the price and marking the contract. So you can reduce your dependence on individual data feeds, more easily maintain an accurate set of records, and spend less time reconciling with your counterparties since you are both working off the same golden copy. ■

We clear the path

OCC℠ has the largest centrally cleared stock loan offering in the world with approximately $76 billion in cleared loan balances. Over the last 25 years, OCC has built an innovative and unique U.S. program for securities lending transactions where OCC steps in as the counterparty (with a two percent risk weight) and guarantees the return of stock or collateral. We continue to enhance and expand access to our stock loan program in order to offer clearing solutions and capital efficiencies for our members and the entire securities finance industry.

As the world's largest equity derivatives clearinghouse, OCC is committed to providing market participants with high quality and efficient clearance, settlement and risk management services. As a systemically important financial market utility, we work to enhance our resiliency in order to reduce systemic risk, increase market transparency, and provide capital and collateral efficiencies for the users of the U.S. capital markets.

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Prevention or cure – a present day conundrum

Scott Brown, Director, Business Development at Pirum, discusses the Settlement Discipline Regime section of the Central Securities Depositories Regulation and its implications for mandatory buy-ins.

The Central Securities Depositories Regulation (CSDR) has been called many things by industry bodies and practitioners alike, 'the zombie regulation', 'the final piece of the post-trade puzzle', but one thing it has not been called is 'simple'. Depending on where you sit within capital markets, your perspective on the regulation will be different.

We have seen phases 1&2 take effect without too much fanfare, but perhaps this is because many institutions are already familiar with the omnibus / segregated account structures from their clearing brokers and the mandatory clearing obligations that the market accepted in the early part of the previous decade.

Phase 2 required institutions to report internally settled trades at any of the authorised CSDs for CSDR, which ESMA (the European Securities and Markets Authority) have published (Articles 21 and 58 of Regulation (EU) No 909/2014 (CSDR)).

The area that has gathered the most attention and perhaps been the most debated, is Phase 3 – Settlement Discipline Regime (SDR). Within this article we will focus on the impact this will have to Securities Finance and what institutions can do to limit the impact ahead of February 2022. As Benjamin Franklin famously advised fire-threatened Philadelphians in 1736 that "An ounce of prevention is worth a pound of cure." In the context of SDR, I think he was right.

SDR focuses on measures to prevent settlement fails and incentivising timely settlement with cash fines and (potential) buy-ins. There is a strong argument relating to buy-ins for securities lending specifically around application and impact to cost and liquidity.

At many an industry forum throughout the last year, practitioners have been sharing their views on what SDR means for securities lending and many appear to have made peace with the fines for fails, but what remains unclear is whether mandatory buy-ins will be applicable and if so when and how.

It is our understanding that ISLA, ICMA, AFME and others are lobbying for mandatory buy-ins to be delayed due to so many unanswered questions. These range from; the general appropriateness of certain components, to practical scenarios such as, how a buy-in is applied when there is a failing market trade and a failing loan or return(s). Are both bought in? And, if so, how?

Securities Lending is a practice with strong foundations built on relationships and buy-ins are seldom initiated due to it being deemed poor practice.

> "At many an industry forum throughout the last year, practitioners have been sharing their views on what SDR means for securities lending and many appear to have made peace with the fines for fails, but what remains unclear is whether mandatory buy-ins will be applicable and if so when and how."

Staying on mandatory buy-ins for the moment, the regulation states that a CSDR buy-in is expected to apply to both legs of a Securities Finance Transaction (SFT), except where the maturity of the trades is within 30 days. The wording of the regulation suggests that it is expressly intended to execute a buy-in against the start leg of an SFT and that the buy-in process will mirror the process used for market fails. Whilst in principle this is clear, the points raised previously suggest that the application of this is far from straightforward.

Whilst the narrative on buy-ins continues to evolve, let's turn our attention to PREVENTION of fails and how institutions can improve their operating model.

CSDR is an opportunity to eliminate some of the inefficiencies and risks endemic in the post-trade operating model. As such CSDR is more than just an exercise in regulatory compliance but rather an open door for smart, cohesive industry best practice.

High settlement efficiency has many benefits, across operational efficiency, risk management and reducing the impact of Risk Weighted Assets. It is a measurable benefit to any banking institution.

Pirum has been at the forefront of the drive to add STP and low fail rates to the Securities Finance market for 20 years and recognises the value and importance of best practice. (Pirum - CSDR Whitepaper: *www.pirum.com/whitepaper-securities-finance-and-csdr-dont-fail-to-deal-with-fails*)

Within Pirum's Future**Tech** Initiative (FTI) we have focused our product development to further support institutions in meeting their goals of enhanced STP and lower fail rates.

Pirum has a suite of products that are key to our current area of focus, PREVENTION. Alongside our much-loved real-time services and life-cycle automation, we offer timely and efficient collateral processes to ensure instructions are released to market at the optimal time, and that both key economics and SSIs are matched prior to Intended Settlement Date (ISD).

Pirum's FTI has created tools such as **Trade Risk Manager** – that helps institutions to make rate changes and change key economics in real-time, again, to prevent fails on either the start or end leg of the transaction.

Several items come to mind when we look at PREVENTION.

- CSDR requires standardised settlement matching fields including transaction type.
- Standardised settlement matching tolerances
- Continuous real-tie matching: economics, SSI's, and confirmations
- Hold and release functionality.
- Partial settlement
- Adoption of electronic tools

"Within Pirum's FutureTech Initiative (FTI) we have focused our product development to further support institutions in meeting their goals of enhanced STP and lower fail rates."

Pirum continues to work with clients to review their operating model and has (since Jan 2020) provided existing clients with an indicative fails report, to give institutions a view on how their BAU activity would look in a SDR environment.

Whilst the industry looks at buy-ins, it would make sense to begin or continue looking at the following:

- Can I partner with my vendor(s) to utilise more functionality to complement and improve my operating model?
- Do the services they offer create enhanced STP and reduce the risk of fails?
- Are there services available that reduce communication time for changes to a trade that will impact settlement?
- Do you have certain clients / brokers who tend to fail more than others?
- How often are you unmatched? How often are you the cause of the unmatched? How often do you amend your transaction after ISD?
- Review your settlement efficiency for potential weakness in process.
- Reviewing your client pool to identify which clients may not be delivering on time when securities are recalled.
- How efficient are your settlement processes to execute and deliver lending transactions late in the day, so a review of your custodian and market deadlines could be beneficial.

Pirum actively supports and participates in several trade association and industry body best practice groups and is committed to improving the securities finance industry. There is a real opportunity to influence the implementation of an important regulation, but time (as always) is of the essence.

There is a short way to go but much to be done to be ready for go-live in February 2021. ■

For more information

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The drive for five

The results of the Global Investor 2021 Beneficial Owners Survey reflect an investor focus on differentiated performance, collateral management solutions and service responsiveness against the backdrop of the stressed market conditions over the past year, Deutsche Bank's agency securities lending experts **Johnny Grimes** and **Zorawar Singh** tell *Global Investor's* **Paul Golden**

Ambitions remain high for 2021 as Deutsche Bank seeks to build on its success in the 2021 Beneficial Owners Survey where it was the top ranked agent in the EMEA region for a fourth successive year.

"Our existing and prospective clients were presented with a series of extraordinary liquidity challenges over the past twelve months and this award is testament to the innovation and endeavour of our agency securities lending team to help address those investor requirements through tailored transaction frameworks. Amongst the five evaluation criteria that we accomplished a top rating in, the success in collateral management and client responsiveness are particularly relevant in this context," says Zorawar Singh, Global Head of Off Balance Sheet Solutions at Deutsche Bank.

The award for income generation indicates that Deutsche Bank has traded well (as a securities finance agent) throughout the crisis and outperformed its peers in that space. According to Johnny Grimes, the bank's Global Head of Liquidity Product and Transactional FX: "In an industry where revenue contracted by as much as 12% in 2020, to achieve the top rating by clients for income generation is particularly satisfying and is evidence of continued client willingness to work on a consultative basis with our trading desks, to evaluate and commit to incremental trade opportunities."

2020 – Liquidity, liquidity, liquidity

Singh believes that the management of liquidity was the primary motivation influencing institutional investors in their use of securities lending and repo in 2020. This was particularly evident amongst central banks and pension funds – both traditional core client constituencies for the Deutsche Bank's Agency Securities Lending business. It was similarly a priority for corporate Treasurers - a client segment that is not within the traditional purview of agency lending providers.

Central banks were probably the busiest market protagonists in 2020. The measures they implemented to mitigate the negative economic effects of the pandemic were on a scale and timeline without precedent. The Eurosystem unveiled a series of monetary policy responses in March 2020 including the establishment of the now €1.85tn Pandemic Emergency Purchase Programme (PEPP).

Importantly the Eurosystem monetary authorities extended the securities lending framework that supplements the operations of longer standing quantitative easing facilities, to include the newly initiated PEPP. This ensures that the Eurosystem securities lending facilities continue to serve as an effective backstop, supporting bond and repo market liquidity without unduly curtailing normal repo market activity.

"Agency securities lending is part of the transmission mechanism for a number of these securities lending facilities – a solution with highly customised and complex guidelines governing eligible counterparty, collateral, pricing, concentration and term characteristics," says Grimes. "These mandates are highly consultative in character and extensively leverage market analytics to support the evaluation of liquidity outcomes"

Singh adds: "As a mainly third party (non-custodian) lending agent, our operating model is inherently agile as it services more sophisticated investors who decouple securities services and securities lending to optimise the outcome of the latter service. This agility is a key differentiator in framing liquidity solutions that are often idiosyncratic to each client's circumstances".

Pension Funds are another key beneficial owner group in the securities lending sector commanding over a quarter of total industry lendables and a third of outstanding loan balances.

Liquidity is a cornerstone of pension fund management. The volatility in market valuations during March and April 2020 translated into a dramatic increase in the requirement to access cash to meet the margin calls on the derivatives overlay and foreign-exchange hedges that are integral to pension fund operations. According to Singh, "from Q1 2020, we witnessed a considerable increase in the volume and depth of inquiries from pension funds around how to harness cash collateral raised within our programme to meet the demand for margin calls in unrelated products – a product we refer to as Agency Repo."

Grimes highlights that "Our Agency Repo solutions are multi-currency and can be reinforced with balance sheet backed commitments to immunise against potential liquidity disruption caused by reduced bank intermediation in repo markets over key accounting dates or other periods of market stress".

In terms of industry RFP activity in 2020 and YTD 2021, Deutsche Bank observes a significantly greater focus by asset owners (such as pension funds, insurance companies and sovereign investors) in formally evaluating Agency Repo solutions where they use the established legal, trading, risk and operations infrastructure of an agent lender to gain access to secured markets.

Singh opines that "since the 2008 global financial crisis, investors have witnessed a series of lesser volatility events that nonetheless focused minds on the associated liquidity and funding challenges. Institutional investors are increasingly conscious of moving beyond pure regulatory compliance to standards such as the uncleared margin rules. Instead, they want contingency funding frameworks that will serve them during future dislocations in liquidity – originating from populism movements, geopolitical tensions, environmental events or cybersecurity threats – the frequency and magnitude of which are unclear."

> "We see liquidity management as a key tenet of securities lending and this was a critical component of our client discussions during 2020."
>
> **Zorawar Singh,** Global head of Off Balance Sheet Solutions, Deutsche Bank

Two sides – one coin:
In response to the heightened volatility experienced in 2020, treasurers have increased their cash buffers, and notably across different currencies, to ensure they have ready access to liquidity and to avoid being forced sellers in strained equity or private markets in particular.

Singh advises that "in this context Deutsche Bank's Agency repo offering is dual-faceted. As mentioned previously it is highly effective in generating multi-currency term funding through the mobilisation of an institutional investor's long HQLA positions. Equally, it is a standalone solution for treasurers to diversify their investment allocation beyond deposits and money market funds to include access to secured investment markets and reduces the potential performance downside associated with managing significant cash buffers."

Interestingly, the use of agency repo as a tool to manage excess cash also widens the prospective client dialogue beyond traditional securities lending asset manager and asset owner relationships to include corporate treasurers. "Corporates are a cornerstone of Deutsche Bank's client base for over 150 years and supporting their evolving treasury requirements through varying market conditions is a central pillar of our enterprise strategy. We believe that agency repo represents an important supplemental liquidity management option for Treasurers alongside our traditional cash and liquidity offerings" says Grimes.

Delivering liquidity management solutions – either funding or as an investment mechanism – differs materially from traditional securities lending where agent lenders capture value by managing client portfolios through a loan allocation algorithm in the context of an industry where supply exceeds demand by a factor of 10:1.

"Successful liquidity outcomes rely on a deep understanding of the specific treasury requirements of each client – in both routine and strained market conditions – and aligning that with our market expertise and distribution capabilities across various financing market counterparties. The result is individualised solutions underpinned by our historical strengths in working with sophisticated investors on complex, customised solutions supported by operating model agility and deep enterprise relationships. These are hallmarks of Deutsche Bank's lending programme for over three decades," according to Singh.

Grimes concludes that "we expect to witness continued momentum in the agency repo business as investors optimise liquidity management and contingency frameworks and de-couple these from the safekeeping and settlement services of traditional custodians. This is complementary to our longstanding securities lending business and reinforces the relevance and sustainability of the business across Deutsche Bank's Corporate Bank." ■