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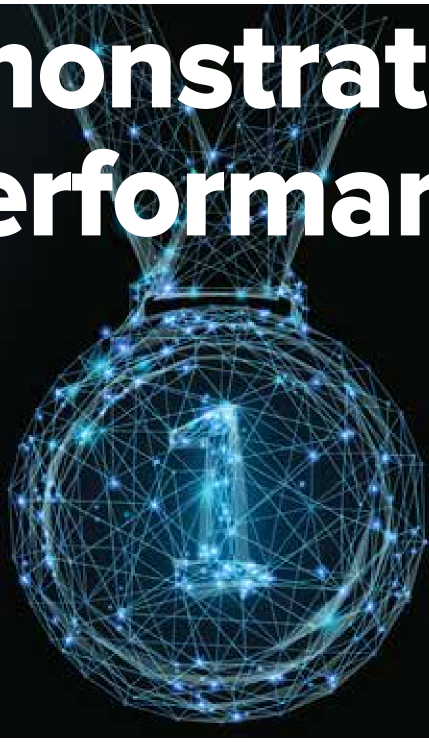
BENEFICIAL OWNERS SPECIAL REPORT 2018

Beneficial owners survey & US roundtable discussion, sponsored by DataLend

Lenders demonstrate sustained performance



Goldman Sachs Agency Lending and State Street shared the two top awards in the Global Investor/ ISF 2018 Beneficial Owners Survey

The Global Investor/ ISF 2018 Beneficial Owners survey polled some of the world's main beneficial owners on the performance of their key lending suppliers, comprising both lending services provided by their custody clients and agent lenders

The 2018 results are consistent with previous years, including 2017, which saw a spread of results with various lending firms winning the top prizes in different regions and specialisms.

The results are based on a survey of 101 beneficial owners, including large asset managers, mutual fund managers and pension funds as well as central banks, insurance companies and corporations.

The winner of the weighted All Lenders category was State Street. The US banking giant claimed top spot for 2018 and reversed the 2017 result when it was narrowly third behind J.P. Morgan in first and Goldman Sachs Agency Lending (GSAL). This year J.P. Morgan was second and GSAL was third.

The results were mixed by region however. J.P. Morgan won the best weighted provider in the Asia-Pacific, State Street was the best weighted lender in the Americas and Deutsche Bank Agency Securities Lending (ASL) claimed the gong for Europe.

In the 2018 unweighted rankings, GSAL was the top provider, beating eSecLending, State Street, Deutsche Bank ASL and J.P. Morgan, all of which were within just 0.07 points of each-other.

Last year was similarly tight, when GSAL narrowly beat eSecLending, J.P. Morgan, State Street and Deutsche Bank ASL in that order.

For 2018, J.P. Morgan was the top performer in Asia Pacific, GSAL was pre-eminent in the Americas and Deutsche was best in Europe.

The survey also polled beneficial owners on their perceptions of agent lenders and firms whose offer lending as well as part of a larger custodial offering.

GSAL was ranked the top agent lender while State Street was the top custodian in both the weighted and unweighted categories..

State Street

State Street was the top-ranked lenders across all categories in the weighted division. The US firm scored 6.86, which was enough to beat its main rivals J.P. Morgan and GSAL into second and third spots, according to the respondents to the Global Investor/ ISF survey.

This reversed last year's results when State Street (6.60) was narrowly beaten into third by J.P. Morgan (6.73) and GSAL (6.65).

State Street amassed in 2018 a global total score of 20.59 and was ranked top-weighted supplier in the Americas, second in Asia-Pacific behind J.P. Morgan and third in Europe behind Deutsche Bank ASL and Citi.

State Street also returned impressive results by function. The US group was top-ranked in the weighted category for almost every custody function: collateral management; engagement on corporate actions; income generated; lending programme management; market coverage; programme customisation; market and regulatory updates; relationship management; risk management; and settlement and responsiveness.

Among the custody suppliers, State Street also performed well. It was top-ranked globally and was the top pick in the Americas, a close second to Citi in Europe and not far behind J.P. Morgan in Asia-Pacific.

ALL LENDERS (WEIGHTED)					
COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Citi	6.87	6.11	5.13	18.11	6.04
Deutsche Agency Lending	6.94	4.95	X	11.89	5.95
eSecLending	5.29	5.99	X	11.28	5.64
Goldman Sachs Agency Lending	5.88	6.88	X	12.76	6.38
J.P. Morgan	6.79	6.85	6.26	19.90	6.63
RBC Investor & Treasury Services	4.72	4.78	X	9.50	4.75
State Street	6.84	7.58	6.17	20.59	6.86

ALL LENDERS (UNWEIGHTED)					
COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Citi	6.27	6.37	5.48	18.12	6.04
Deutsche Agency Lending	6.80	6.22	X	13.02	6.51
eSecLending	6.50	6.55	X	13.05	6.53
Goldman Sachs Agency Lending	6.72	6.63	X	13.35	6.68
J.P. Morgan	6.57	5.96	6.81	19.34	6.45
RBC Investor & Treasury Services	6.27	6.15	X	12.42	6.21
State Street	6.63	6.22	6.71	19.56	6.52

The beneficial owners were unsurprisingly complimentary about the performance of State Street.

One respondent said: "State Street provides a very good level of customer service from securities lending relationship managers and operations contacts."

Another respondent said in their notes: "We are very satisfied with the State Street offer. Their services are very reliable and high quality. I feel enthusiastic, energetic and positive behaviour from them."

One respondent was particularly positive about State Street's performance in its home market. The individual said: "State Street provides excellent returns in US government and US equity lending."

State Street was comfortably ranked top US provider in every weighted category, according to the Global Investor/ ISF 2018 survey.

The US financial services giant was also highly ranked in terms of innovation. One respondent said: "State Street has been proactive to come-up with innovative ways to increase security lending income from our account."

Another firm went further, saying: "We launched a fund that uses a credit facility funded by cash collateral from securities lending."

Goldman Sachs Agency Lending

Goldman Sachs Agency Lending (GSAL) was top in the unweighted category with 6.68, above eSecLending at 6.53, State Street at 6.52, Deutsche Bank ASL at 6.51 and J.P. Morgan at 6.45.

The unweighted win follows the same result last year when GSAL scored 6.77 in the unweighted category, topping eSecLending with 6.67, J.P. Morgan with 6.57 and State Street with 6.56.

In the weighted group, GSAL received an overall score of 6.38, narrowly behind State Street with 6.86 and J.P. Morgan's 6.63.

Regionally, GSAL was ranked first in the Americas in the unweighted category and second behind Deutsche Bank (ASL) in Europe.

In the weighted section, GSAL was second behind State Street for lending services in the Americas.

In 2018, the agency lender also scored well in the individual service categories. GSAL was top among its unweighted peer group in nine of the 12 functional categories: engagement on corporate actions; market coverage in developed markets; market coverage for collateral management; emerging markets; programme customisation; market and regulatory updates; relationship management; reporting transparency; and risk management.

When compared to other agent lenders, GSAL also fared well. The business was the highest overall scorer in both the weighted and unweighted lists, top in the Americas and second to Deutsche in Europe by both measures.

Ranked against the other agency lenders, GSAL was top-rated for every individual service in the unweighted list except income generated, and settlement and responsiveness (both Deutsche Bank ASL) and lending programme parameter management (eSecLending).

In the weighted section, GSAL swept the board, taking top rating in every one of the 12 categories.

Those beneficial owners that provided comment were glowing in their praise. One said: "GSAL consistently delivers top notch customer service and is a true leader in the industry. As a firm, we rely heavily on GSAL for guidance on regulatory changes and industry insights. They are instrumental in our board reporting process and are thought of highly by our board as a result of their experience with GSAL."

Another owner commented: "GSAL is pro-active and shows good market access on equities and government bonds. GSAL has a high level of customisation and flexibility on the lending program to facilitate the lender needs."

One said: "Overall excellent relationship management. Very constructive in trying to solver operational issues that popped up." Another added: "Excellent communication and client service."

GSAL was also highly-rated on its approach to innovation.

"They provide outstanding service, are great problem solvers and have excellent communication across organisations," said one respondent.

Another said: "Goldman Sachs Agency Lending consistently delivers performance and customisation at the levels we require to conduct business in the lending space."

"They provide outstanding service, are great problem solvers and have excellent communications across organisations," said another.

The unit was particularly rated for the work it has done to ensure clients are up-to-speed with the many and vast regulatory reforms in play at the moment.

"GSAL have been very proactive in keeping up with regulatory reform and engaging with clients to

develop appropriate reporting," said one respondent. Another added: "Key collaborator, understanding our data needs, for Securities and Exchange Commission Data Reporting Modernisation."

J.P. Morgan

The US banking giant had another strong year, following from its success in 2017 when it was ranked top among the weighted lending suppliers and third in the unweighted.

Last year, it had a weighted ranking of 6.73, beating GSAL with 6.65 and State Street with 6.60. In 2018, J.P. Morgan was second in the weighted league with 6.63, narrowly behind the winner State Street with 6.86.

The US bank was fifth in the hotly contested unweighted category, scoring 6.45. This left JP behind GSAL (6.68), eSecLending (6.53), State Street (6.52) and Deutsche Bank ASL (6.51).

J.P. Morgan also scored well in the regional rankings. It was top for the weighted and unweighted categories for Asia-Pacific, beating State Street in second and Citi in third. It was also narrowly behind State Street in the global

ALL LENDERS SERVICE CATEGORIES (WEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	HANDLING OF CORPORATE ACTIONS/ DIVIDENDS	INCOME GENERATED VS EXPECTATION	LENDING PROGRAMME PARAMETER MANAGEMENT
Citi	6.71	4.31	7.98	5.74
Deutsche Agency Lending	X	X	8.20	5.45
eSecLending	X	3.94	7.83	5.60
Goldman Sachs Agency Lending	X	4.48	8.54	6.06
J.P. Morgan	7.36	4.54	8.71	6.57
RBC Investor & Treasury Services	5.23	3.24	6.66	4.18
State Street	**7.49**	**4.87**	**9.60**	**6.82**

COMPANY	DEVELOPED MARKET COVERAGE	EMERGING MARKET COVERAGE	PROGRAMME CUSTOMISATION	PROVISION OF MARKET AND REGULATORY UPDATES
Citi	3.99	2.99	4.79	2.95
Deutsche Agency Lending	3.76	X	X	3.02
eSecLending	3.87	2.83	4.59	3.02
Goldman Sachs Agency Lending	4.27	3.09	5.18	3.40
J.P. Morgan	4.65	3.19	5.25	3.40
RBC Investor & Treasury Services	3.28	2.34	3.63	2.30
State Street	**4.74**	**3.46**	**5.45**	**3.73**

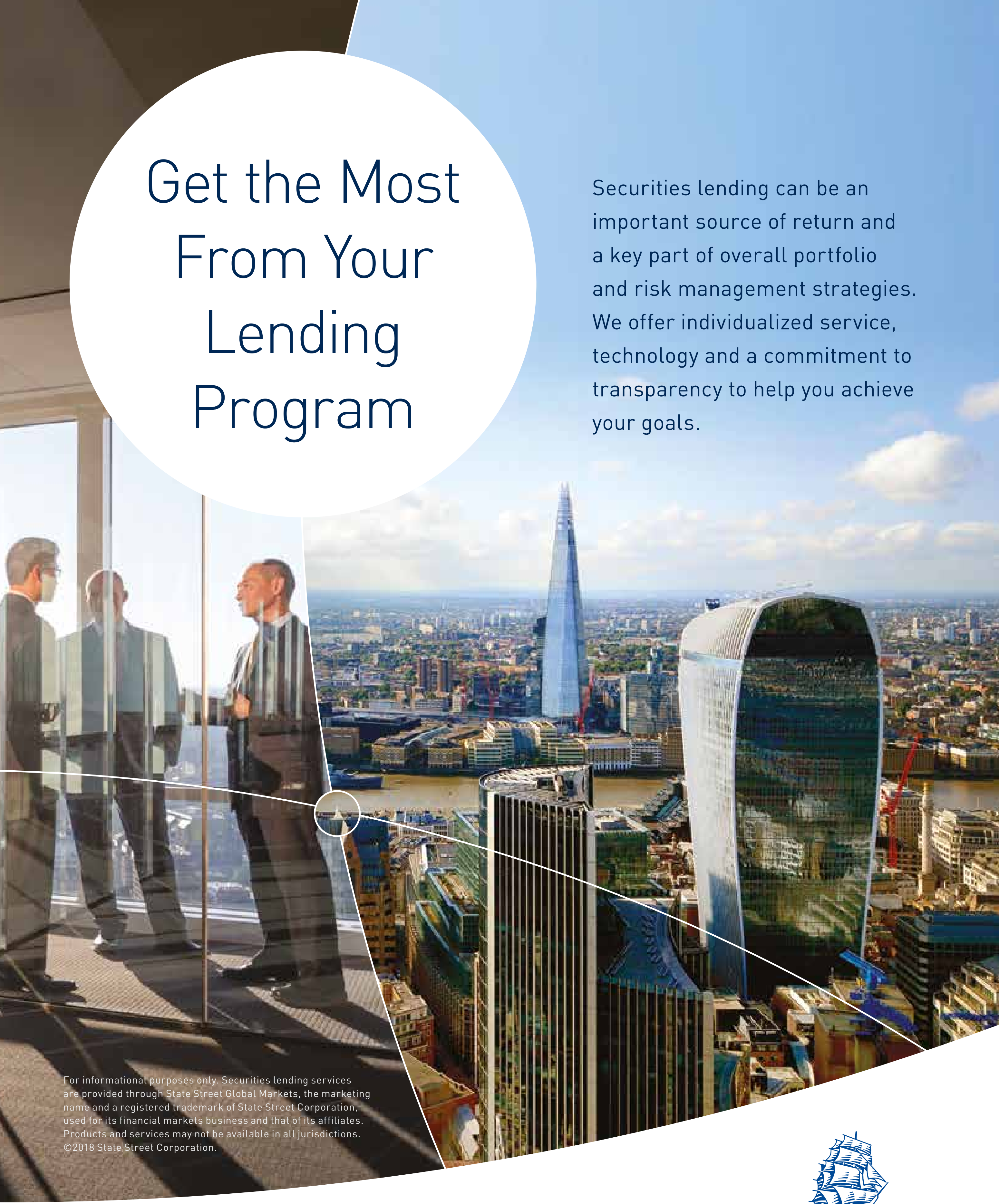
COMPANY	RELATIONSHIP MANAGEMENT	REPORTING AND TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS TO RECALLS
Citi	6.95	7.09	10.59	7.89
Deutsche Agency Lending	6.63	7.22	10.09	7.26
eSecLending	6.70	7.06	9.74	7.09
Goldman Sachs Agency Lending	7.35	8.04	10.95	7.83
J.P. Morgan	7.79	**8.75**	11.68	8.41
RBC Investor & Treasury Services	5.48	5.66	8.08	5.74
State Street	**7.82**	8.63	**12.14**	**8.73**

ALL LENDERS SERVICE CATEGORIES (UNWEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	HANDLING OF CORPORATE ACTIONS/ DIVIDENDS	INCOME GENERATED	LENDING PROGRAMME PARAMETER MANAGEMENT
Citi	6.28	6.45	5.81	6.15
Deutsche Agency Lending	X	X	**6.64**	6.43
eSecLending	X	X	6.42	**6.67**
Goldman Sachs Agency Lending	X	**6.88**	6.38	6.63
J.P. Morgan	**6.47**	6.26	5.95	6.47
RBC Investor & Treasury Services	6.33	6.09	6.25	6.09
State Street	6.44	6.59	6.33	6.56

COMPANY	DEVELOPED MARKET COVERAGE	EMERGING MARKET COVERAGE	PROGRAMME CUSTOMISATION	PROVISION OF MARKET AND REGULATORY UPDATES
Citi	6.11	6.17	6.20	5.67
Deutsche Agency Lending	6.43	X	X	6.38
eSecLending	6.67	6.58	6.58	6.42
Goldman Sachs Agency Lending	**6.69**	**6.64**	**6.81**	**6.63**
J.P. Morgan	6.65	6.22	6.26	6.10
RBC Investor & Treasury Services	6.50	6.25	6.36	6.00
State Street	6.63	6.60	6.33	6.44

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING AND TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS TO RECALLS
Citi	6.38	5.71	6.33	6.48
Deutsche Agency Lending	6.71	6.43	6.64	**6.57**
eSecLending	6.83	6.33	6.42	6.42
Goldman Sachs Agency Lending	**6.88**	**6.63**	**6.69**	6.56
J.P. Morgan	6.60	6.50	6.45	6.37
RBC Investor & Treasury Services	6.42	5.83	6.17	6.00
State Street	6.44	6.28	6.50	6.44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BENEFICIAL OWNERS SURVEY 2018

totals, with 19.90 weighted (compared to State Street's 20.59) and 19.34 unweighted (versus State Street's 19.56).

The US firm also came a close second to State Street in most of the weighted rankings by function, including: collateral management; engagement on corporate actions; lending programme management; market coverage; programme customisation; market and regulatory updates; relationship management; risk management; and settlement and responsiveness.

J.P. Morgan was the only lender to beat State Street in one of the weighted functional rakings, outscoring its rival with 8.75 for reporting transparency, compared to State Street's 8.63.

Among the custodial lenders, J.P. Morgan again pushed State Street close on most categories or surpassed its rival. It was top in this group in Asia-Pacific for both weighted and unweighted. It was also second in Europe, the Middle East and Africa in the unweighted list and second in the Americas when weighted.

JP was also the top lender for collateral management, relationship management and reporting transparency in the unweighted group, according to respondents.

Reflecting the high ratings they gave to the bank, the beneficial owner respondents to the survey had good things to say about J.P. Morgan's lending programme.

One said: "J.P. Morgan has made numerous improvements to their securities lending reporting suite over

CUSTODIAL LENDERS (WEIGHTED)

COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Citi	**7.31**	6.52	5.05	18.88	6.29
J.P. Morgan	6.79	7.03	**6.26**	20.08	6.69
RBC Investor & Treasury Services	4.72	4.78	X	9.50	4.75
State Street	7.30	**7.58**	6.17	**21.05**	**7.02**

CUSTODIAL LENDERS (UNWEIGHTED)

COMPANY	EMEA	AMERICAS	ASIA PACIFIC	GLOBAL TOTAL	AVERAGE
Citi	6.42	**6.33**	5.35	18.10	6.03
J.P. Morgan	6.57	6.08	**6.81**	19.46	6.49
RBC Investor & Treasury Services	6.27	6.15	X	12.42	6.21
State Street	**6.94**	6.22	6.71	**19.87**	**6.62**

CUSTODIAL LENDERS SERVICE CATEGORIES (WEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	HANDLING OF CORPORATE ACTIONS/ DIVIDENDS	INCOME GENERATED VS EXPECTATION	LENDING PROGRAMME PARAMETER MANAGEMENT
Citi	6.27	4.50	8.61	6.00
J.P. Morgan	7.41	4.52	8.93	6.56
RBC Investor & Treasury Services	5.23	3.24	6.66	4.18
State Street	**7.59**	**4.94**	**9.79**	**6.97**

COMPANY	DEVELOPED MARKET COVERAGE	EMERGING MARKET COVERAGE	PROGRAMME CUSTOMISATION	PROVISION OF MARKET AND REGULATORY UPDATES
Citi	4.09	3.09	4.85	3.06
J.P. Morgan	4.70	3.24	5.28	3.47
RBC Investor & Treasury Services	3.28	2.34	3.63	2.30
State Street	**4.85**	**3.54**	**5.56**	**3.80**

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING AND TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS TO RECALLS
Citi	7.20	7.35	11.16	8.29
J.P. Morgan	7.85	**8.82**	11.77	8.08
RBC Investor & Treasury Services	5.48	5.66	8.08	5.74
State Street	**7.92**	8.73	**12.39**	**8.84**

CUSTODIAL LENDERS SERVICE CATEGORIES (UNWEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	HANDLING OF CORPORATE ACTIONS/ DIVIDENDS	INCOME GENERATED VS EXPECTATION	LENDING PROGRAMME PARAMETER MANAGEMENT
Citi	5.71	6.38	6.00	6.08
J.P. Morgan	**6.53**	6.28	6.11	6.50
RBC Investor & Treasury Services	6.33	6.09	6.25	6.09
State Street	6.47	**6.63**	**6.41**	**6.65**

COMPANY	DEVELOPED MARKET COVERAGE	EMERGING MARKET COVERAGE	PROGRAMME CUSTOMISATION	PROVISION OF MARKET AND REGULATORY UPDATES
Citi	5.92	6.00	5.92	5.57
J.P. Morgan	6.72	6.35	6.33	6.22
RBC Investor & Treasury Services	6.50	6.25	6.36	6.00
State Street	**6.73**	**6.71**	**6.41**	**6.53**

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING AND TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS TO RECALLS
Citi	6.29	5.64	6.36	**6.50**
J.P. Morgan	**6.67**	**6.56**	6.50	6.11
RBC Investor & Treasury Services	6.42	5.83	6.17	6.00
State Street	6.47	6.29	**6.59**	6.47

the last few years. We're pleased with the reporting capabilities and transparency this provides into the program. We also receive a high-level of customer service from securities lending relationship managers and operations contacts."

Another owner said: "Excellent relationship management and very nimble intrinsic value lending agent. Always thinking of clients' risk profile, forward thinking and taking necessary steps to prevent any regulatory issues prior to changes taking effect."

A third participant said simply: "First class offering, delivered by a first class team."

The US bank also scored high in terms of innovation: "One participant said: "Their reporting suite is excellent as well as communication and updates on the markets."

Another beneficial owner said JP was "proactive in expanding revenue opportunities" with "kind and excellent personnel". The personal aspect was emphasised by another participant who said: "Because they offer a complete service, everything is thought of and covered."

Deutsche Bank Agency Securities Lending

Deutsche Bank Agency Securities Lending repeated in 2018 its performance from last year when it came fifth in the weighted listed of all securities lending providers. This year Deutsche scored 5.95, narrowly behind Citi's 6.04 and the top three of State Street, J.P. Morgan and GSAL

Deutsche Bank ASL is very strong in Europe. The German bank's lending arm was ranked top for Europe, the Middle East and Africa in the weighted list, where it scored an impressive 6.94, and the unweighted section with 6.80.

Deutsche, unlike some of its peers, does not offer all of the functions listed in the survey but it excels in some of those it does offer. The German lender was listed top for income generated, and settlement and responsiveness, in the unweighted list.

It was second among its peers in the unweighted list for relationship management and risk management, and third for reporting transparency.

Among the list of agent lenders, Deutsche Bank ASL was again preeminent in Europe in both the weighted and unweighted list. It was also top among its unweighted agent lending peers for income generated, and settlement and responsiveness, and second for collateral management, programme customisation and reporting transparency.

One participant said: "We very much appreciate the high quality of the securities lending services and the flexibility with regard to the programme parameters and reporting that Deutsche Bank Agency Securities Lending provides to us."

Another lender said: "Our agent lender responds very quickly to any questions or issues we may have at any given time. The agent client and relationship services works very well with our portfolio investment and securities settlement function. Our agent lender has been extremely helpful in when involved in communications with our fiscal operations, internal audit and external audit."

One lender said: "Overall we are very satisfied with the services provided by Deutsche Bank."

Another added: "We are very pleased with the results of our lending program."

Speaking on Deutsche Bank ASL's ability to innovate, one lender said: "Through periodic calls, this provider has indicated the status of fixed income lending and the various classes of securities. They had the most innovative response to an RFP for securities lending last summer. The Request-For-Proposal (RFP) we published was very different from the last one 10 years ago. Mostly due to changes in portfolio composition."

Another respondent commented on Deutsche's lending arm: "Forward looking handling of German equity transactions."

A lender said: "Our experience is that Deutsche Agency Lending has assisted in finding innovative ways to meet our needs."

Citi

The US banking giant consolidated on its solid performance in 2017, when it finished fourth in the weighted list of lenders, by running State Street, J.P. Morgan and GSAL close again in 2018. Citi Agency Securities Lending was fourth this time round with a weighted score of 6.04.

Citi's universal approach was seen to pay-off also as the firm was ranked by beneficial owners on weighted basis as the second best lender in Europe, the fourth best in the Americas and third in Asia-Pacific.

By function the US investment bank's securities lending service also ranked highly. It was fourth among its unweighted peer group in terms of collateral management, third to GSAL and State Street for engagement on corporate actions and third to Deutsche Bank Agency Securities Lending and GSAL on settlement and responsiveness.

In the weighted list, Citi was fourth to J.P. Morgan, GSAL and State Street for relationship management and risk management, and third to State Street and J.P. Morgan for settlement and responsiveness.

Among the custodial lenders, Citi was third overall in the weighted group behind State Street and J.P. Morgan. The owner respondents ranked Citi first among its custodial peers in Europe, the Middle East and Africa, and third behind State Street and J.P. Morgan in the Americas and Asia-Pacific.

Compared to its custodial peers, Citi was in the unweighted category first for settlement and responsiveness, narrowly beating State Street in second, and second to State Street for engagement on corporate actions.

Citi finished in the weighted group third to State Street and J.P. Morgan in most functional categories: collateral management; engagement on corporate actions; income generated; lending programme parameter management; market coverage in developed markets; market coverage for emerging markets; programme customisation; market and regulatory updates; relationship management; reporting transparency; risk management; and settlement and responsiveness.

One beneficial owner said: "Citi is a

THIRD-PARTY AGENT LENDERS (WEIGHTED)

COMPANY	EMEA	AMERICAS	GLOBAL TOTAL	AVERAGE
Citi	X	6.18	X	6.18
Deutsche Agency Lending	**6.94**	4.95	11.89	5.95
eSecLending	5.29	5.99	11.28	5.64
Goldman Sachs Agency Lending	5.88	**6.88**	**12.76**	**6.38**

THIRD-PARTY AGENT LENDERS (UNWEIGHTED)

COMPANY	EMEA	AMERICAS	GLOBAL TOTAL	AVERAGE
Citi	X	6.42	X	6.42
Deutsche Agency Lending	**6.80**	6.22	13.02	6.51
eSecLending	6.50	6.55	13.05	6.53
Goldman Sachs Agency Lending	6.72	**6.63**	**13.35**	**6.68**

THIRD-PARTY AGENT LENDERS SERVICE CATEGORIES (WEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	HANDLING OF CORPORATE ACTIONS/ DIVIDENDS	INCOME GENERATED VS EXPECTATION	LENDING PROGRAMME PARAMETER MANAGEMENT
Deutsche Agency Lending	6.42	3.06	8.20	5.45
eSecLending	5.91	3.94	7.83	5.60
Goldman Sachs Agency Lending	**7.05**	**4.48**	**8.54**	**6.06**

COMPANY	DEVELOPED MARKET COVERAGE	EMERGING MARKET COVERAGE	PROGRAMME CUSTOMISATION	PROVISION OF MARKET AND REGULATORY UPDATES
Deutsche Agency Lending	3.76	2.00	4.64	3.02
eSecLending	3.87	2.83	4.59	3.02
Goldman Sachs Agency Lending	**4.27**	**3.09**	**5.18**	**3.40**

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING AND TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS TO RECALLS
Deutsche Agency Lending	6.63	7.22	10.09	7.26
eSecLending	6.70	7.06	9.74	7.09
Goldman Sachs Agency Lending	**7.35**	**8.04**	**10.95**	**7.83**

THIRD-PARTY AGENT LENDERS SERVICE CATEGORIES (UNWEIGHTED)

COMPANY	COLLATERAL MANAGEMENT	HANDLING OF CORPORATE ACTIONS/ DIVIDENDS	INCOME GENERATED VS EXPECTATION	LENDING PROGRAMME PARAMETER MANAGEMENT
Deutsche Agency Lending	6.69	5.33	**6.64**	6.43
eSecLending	6.63	6.36	6.42	**6.67**
Goldman Sachs Agency Lending	**6.77**	**6.88**	6.38	6.63

COMPANY	DEVELOPED MARKET COVERAGE	EMERGING MARKET COVERAGE	PROGRAMME CUSTOMISATION	PROVISION OF MARKET AND REGULATORY UPDATES
Deutsche Agency Lending	6.43	5.00	6.62	6.38
eSecLending	6.67	6.58	6.58	6.42
Goldman Sachs Agency Lending	**6.69**	**6.64**	**6.81**	**6.63**

COMPANY	RELATIONSHIP MANAGEMENT	REPORTING AND TRANSPARENCY	RISK MANAGEMENT	SETTLEMENT AND RESPONSIVENESS TO RECALLS
Deutsche Agency Lending	6.71	6.43	6.64	**6.57**
eSecLending	6.83	6.33	6.42	6.42
Goldman Sachs Agency Lending	**6.88**	**6.63**	**6.69**	6.56

very flexible and accessible partner, and they consistently look for opportunities to maximise income within a string risk framework."

Another said: "Citi is very responsive to our reporting needs, maintaining our parameters and the recall process."

Another respondent told the survey: "great operation and client relationships teams. They have made our daily business processes seamless and easy."

Another said simply: "Again the best performing agent this year."

In terms of innovation, one lender said: "They keep us up-to-date with regulations that affect our program. They have come up with new technology and various programs so we can benefit more from our securities lending program."

Another added: "They have a willingness to open new markets particularly in Asia."

eSecLending

The securities lending firm was ranked by its beneficial owner clients second (6.53) compared to its major rivals in the unweighted list, behind outright winner GSAL (6.68), and sixth in the weighted list.

By region, eSecLending was narrowly second in the Americas to GSAL in the unweighted category and fifth in Europe, the Middle East and Africa. In the weighted group, eSecLending was fifth in the Americas and sixth in EMEA.

The firm scored particularly well in the weighted section for the various functions that comprise the holistic securities lending service.

eSecLending was ranked number one by the beneficial owners for unweighted lending programme parameter management. It was second for income generated (behind Deutsche Bank ASL), developed market coverage (behind GSAL) and programme customisation (also GSAL).

The lending firm was rated third for emerging market coverage and provision of market and regulatory updates, and fourth for engagement in corporate actions and reporting transparency.

eSecLending was second overall behind GSAL when compared to pure agency lenders on an unweighted basis and second in the Americas.

Against the other agency lenders, eSecLending was again first on an unweighted basis for lending programme parameter management and second in: engagement on corporate actions; income generated; developed market coverage; emerging market coverage; provision of market and regulatory updates; and relationship management.

On a weighted basis, it was second for: engagement on corporate actions; lending programme parameter management; developed market coverage; emerging market coverage; provision of market and regulatory updates; and relationship management.

A respondent to the survey commented: "eSecLending is engaged and actively seeks to be best of breed in the market place - a truly innovative organisation."

Another said: "eSecLending is constantly looking for new and different opportunities for my program and is very focused on accessing new markets as well as bringing forward innovative peer-to-peer trading opportunities. eSecLending's commitment to performance and service makes them a valued and trusted partner for our securities lending activities."

In terms of innovation, eSecLending was also commended. One owner said: "eSeclending has responded to all of our initiates with support for new innovative products."

Another commented: "They continue to think about what they can offer me as a client by understanding my requirements. They are expanding into new markets and developing unique solutions to make sec lending available to more beneficial owners.

One respondent said: "We have entered into a number of new markets and we have had a number of bespoke reports built for us to help with our Securities Financing Transactions Regulation requirements."

RBC Investor & Treasury Services

The Canadian bank's securities lending arm scored well in the unweighted categories in the 2018 Beneficial Owners survey, largely because RBC I&TS has lots of medium and smaller sized clients which have their ratings diluted by the weighting process.

RBC Investor & Treasury Services was particularly highly rated in collateral management where the business was ranked third compared to all entrants in the unweighted list for collateral management and programme customisation.

The Canadian business was also fourth on an unweighted basis for emerging market coverage and fifth for income generated and developed market coverage.

Compared with its custody securities lending peers, RBC I&TS fared even better, coming second on an unweighted basis for income generated and programme customisation.

One respondent to the survey said of the RBC I&TS service: "We are very happy with the current program, as RBC is both proactive and transparent as well as provides excellent risk management."

The owner added: "We continue to be totally satisfied with the service we receive from RBC I&TS."

RBC Investor & Treasury Services also received plaudits for its approach to innovation. One owner said: "RBC is engaged with industry data and technology providers, offers proactive solution for regulatory changes and ensures continuous development of the program."

Another commented: "RBC I&TS is always curious and creative in making additional security lending income. They are proactive in bringing enhanced lending deals/specials to our attention."

"RBC I&TS proactively offers solution for regulatory requirements. In the past year there was an increased focus on technology," the owner added.

Another client said: "They have continuous revenue optimisation proposals and increased their use of technology and new platforms resulting in growing balances."

SURVEY RESPONDENTS

Consistent with previous year's the Global Investor/ ISF Beneficial Owners Survey 2018 invited beneficial owners of various types to rate their lending providers by region and by the various functions that make up a holistic securities lending service.

The survey polled some 130 different companies. They were diverse by nature, comprising 57 firms that classified themselves as asset managers/ mutual funds, 29 public pension fund managers and nine private pension fund firms. The group also included 14 insurance companies, 11 others, four corporations, three central banks, two sovereign wealth funds and a single endowment fund.

There was also a decent regional spread with 75 of the firms surveyed based in the Americas, some 47 polled firms in Europe and 8 Asian companies.

The 130 companies surveyed were also asked how many firms they engage to manage their securities lending programmes. As with previous years, the majority used only a single firm for stock lending (some 74 firms of 130 asked said they had one lending supplier) but, interestingly, the proposition (57%) was significantly down on last year when more than two thirds (68.7%) used just one firm.

According to the latest survey responses, some 30 of the firms polled (23% compared to 21.4% last year) used two lending experts, some 16 firms used three firms, four used four lenders, two had five firms and one used six lending specialists. Some three firms used more than 10 lending companies to manage their programmes.

The survey group was also diverse in terms of its constituents' size, as measured by assets under management.

Some 27 (just over one fifth of the 130 respondents) said they had less than $10 billion of assets under management. Some 14 firms polled said they had $10-$20 billion assets under management and 25 said they had between $20bn and $50bn under management.

The largest group of respondents (which equated to 67 firms which was just over half of the total number of firms that participated) said they had over $50 billion of assets under management, according to the survey results.

The poll also covered a range of firms in terms of the value of the portfolio that was available for lending.

Some 41 firms, which is just over 30% of the total, said their portfolios that were open to lending were valued at less than $10 billion. Some 18 firms said their portfolios were worth between $10 billion and $20 billion and 24 respondents said their lending portfolios were worth between $20 billion and $50 billion.

A total of 83 firms (63.8%) said their lending portfolios were valued at more than $50 billion.

The beneficial owners also had different appetites to risk. Some 58 firms (the largest group equating to about 44.6% of the total) said they have less than $1bn on loan at any time. Some 45 firms said they have between $1 billion and $5 billion out at any time, 12 said they have between $5 billion and $10 billion out and 18 companies said they will allow more than $10 billion on loan.

The polled beneficial owners were asked to rate their lending suppliers globally and by region (Asia, Europe and the Americas). The individual owner firms were also asked to rank their service providers across: collateral management; engagement on corporate actions; income generated; lending programme parameter management; developed market coverage; emerging markets coverage; programme customisation; provision of market and regulatory updates; relationship management; reporting transparency; risk management; and settlement and responsiveness.

METHODOLOGY

Beneficial owners are asked to rate the performance of their agent lenders across 12 service categories from one (unacceptable) to seven (excellent).

Unweighted methodology

All valid responses for each agent lender are averaged to populate unweighted tables. All responses are given an equal weight, all categories are given equal weight and no adjustment is made for differences in regional averages.

Weighted methodology

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 one of four groups depending on its lendable portfolio and assigned a weighting.

For the purposes of the 2017 survey all Asian responses are given a weighting of 1. Asian responses are not included in determining the quartiles.

Lendable portfolio	Weighting
Below first quartile	0.7
Between first and third quartile	1
Above third quartile	1.3

Step two – weighting for importance: A separate allowance is made for how important beneficial owners in aggregate consider each category to be. Respondents are asked to rank each category in order of importance. An average ranking is then calculated for each of the twelve categories. The weightings are within a theoretical band between 0 and 2 with an average of one to preserve comparability with unweighted scores.

Step three – regional variation: An allowance is also made for differences between average scores in each region to make meaningful global averages.

TABLES AND SCORES

The following scores are calculated for every qualifying agent lender: for each region (where the responding beneficial owners are based), a global total and a global average. Scores for service categories are calculated globally only.

All lenders tables

These contain all beneficial owner responses regardless of its relationship with the agent lender, whether custodial or third-party.

Lenders 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. If the relationship involves both forms of arrangement, the response counts for both the custodial and agent lender tables. All the tables calculated for all lenders are replicated for custodial and third-party agent lenders separately.

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

Most improved

The agent lender that improved its score by the greatest margin over its equivalent 2016 score is the most improved firm. Agent lenders are ineligible if they did not qualify for the 2016 survey.

Service categories

Respondents are asked to rate each of their providers from one (lowest) to seven (highest) 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 listed in the survey respondents box opposite.

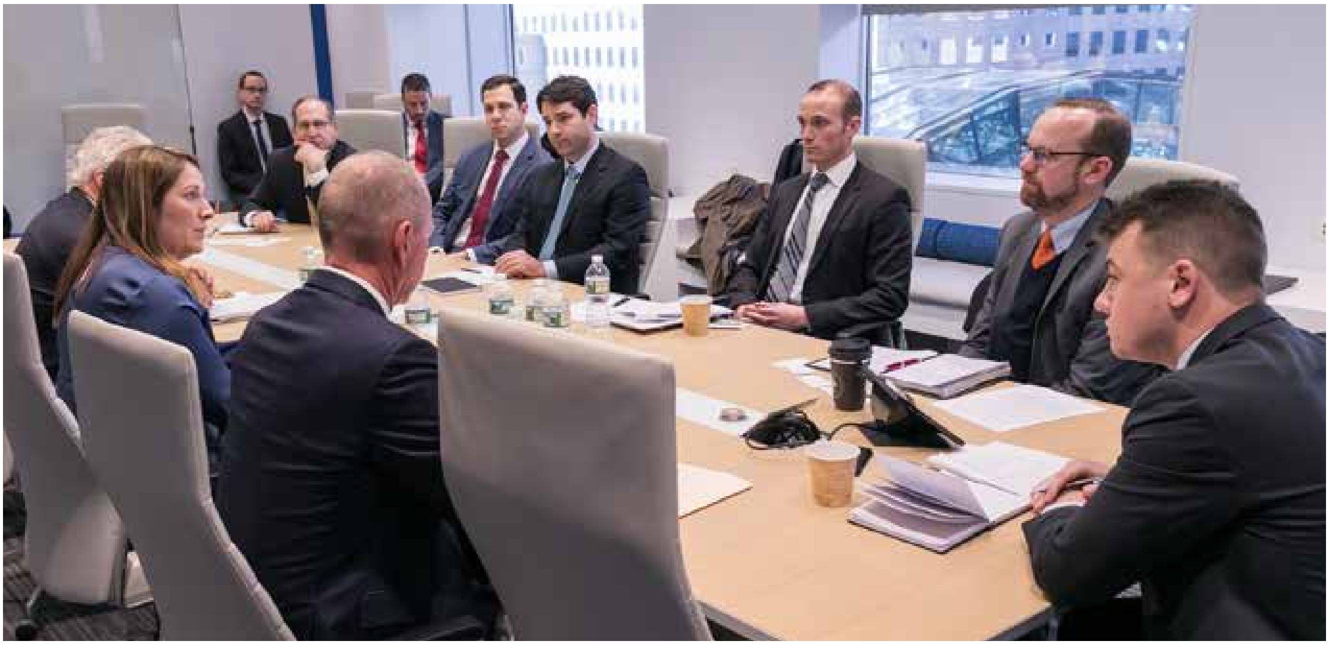
To qualify for each service category table, the lender needs the same amount of responses as to qualify for the corresponding main table; i.e., to qualify for an all lender, custodian or agent lender service category the lender must qualify in two of the three regions. A lender can qualify in some categories and not others – it does not have to qualify globally for every service category to be included in some categories.

VALID RESPONSES

For a response to count for the purposes of qualification, the beneficial owner must rate the agent lender in no fewer than eight of the 12 service categories.

It is possible for a lender to qualify globally or regionally without qualifying for all associated service category tables.

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 (they are considered separate if for different regions).



Avenues of opportunity

Beneficial owners and industry experts met in New York to discuss programme performance and what's in store for the securities lending market in 2018

PARTICIPANTS

Andrew Neil, securities finance editor, Global Investor Group
Nancy Allen, global product owner, DataLend
Bill Kelly, global head of agency securities finance, BNY Mellon
Mike Pate, manager, M&A and securities lending, Western & Southern Financial Group
Eric Pollackov, global head of ETF capital markets, Invesco PowerShares
Paul Sachs, principal, Mercer Sentinel Group
Michael Saunders, head of securities lending investments & trading, BNP Paribas
Bill Smith, managing director, Americas sales executive, J.P. Morgan

Neil: Which types of lending programmes, trades and securities performed well in 2017?

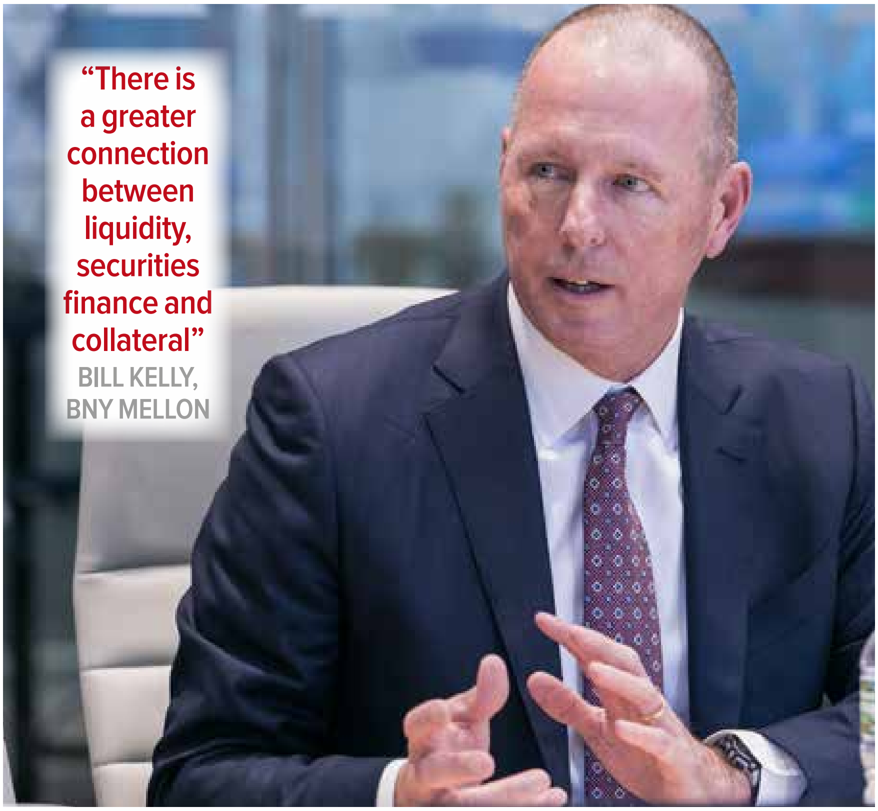
Allen: Beneficial owners with diversified programmes and flexible collateral guidelines captured more value than others in 2017. On the upside we saw an increase in fixed income lending revenues. A significant portion of that balance was out on a term basis and very much focused on sovereign debt. On the equity front, specials activity weakened. The top five securities in 2017 generated around $360 million compared to $800 million in 2016. At the end of 2017 the equities market picked up some steam. However, this was not due to an increase in specials, fees or demand, but rather the equity bull market resulting in higher market values on loan. The industry hit $19 trillion of lendable at the end of 2017, an all-time record.

Saunders: Our programme globally in 2017 experienced what others have witnessed as well- the number specials in the global markets declined in 2017. There were opportunities which we were able to monetize for our clients. The demand for ETFs was robust, for both specific asset classes and individual related countries on the back of various geo-political pressures. We've also seen an uptick in demand for issues linked to specific sectors, namely the retail, healthcare and commodity linked sectors. Post-IPO activity and M&A deal-related names resulted in strong demand which has helped offset some the lack of specials in the market. Finally, utilizing client holdings of HQLA afforded additional opportunities which continue to be a large driver of our programme revenues.

Pate: We saw rates on lendables trade within a range. We noticed either the rebate or the amount lent in our energy holdings adjusted with oil prices. Our Ft. Washington team positioned the portfolio for rising rates on the short end with anticipation of Fed rate increases. This helped us maintain loan balance and income.

Kelly: Diversified asset holders that were able to take advantage of the shift from equities to fixed income did well in 2017. Such investors include large pension funds or sovereign wealth funds that typically are positioned to have one asset class compensate for the other and entertain collateral flexibly with the transformation trades. However, this isn't an egalitarian system. There are certain types of asset owners that are not eligible for that particular type of transaction. It's interesting to see who can and who can't and how they react to those particular circumstances. Certain clients recalibrated their intrinsic value and recognised that the market was different in 2017 versus 2016.

Smith: It wasn't that rising tides lifted all programmes, though falling tides pushed them all in the same direction. There are a lot of different parameters between the different client types. The shift from predominantly cash to predominantly non-cash collateral has a greater effect on some of our clients who don't have as much flexibility around accepting equities as a specific case of non-cash collateral. Trend-wise, I would certainly agree that many clients saw their revenues fall in 2017 because of their concentration in securities types that have been special for the last few years. The types of clients that will



continue to take value out of this market are beginning to change again. Post-crisis, everyone fell to the mean and de-risked. Now many clients are more open-minded and willing to look at other avenues.

Sachs: I work with a global team of specialists that focus on the governance and implementation of investment operations. One portion of our remit is to advise clients on securities lending. There was a fairly quiet period from 2010-2015 where there wasn't a lot of interest from end investors. Early in 2017, we started seeing more enquiries than we'd seen in the previous two or three years together. Not all of those enquiries resulted in new commitments to programmes, but it's a marked difference from 2012. People are starting to warm up securities lending. The tide has turned.

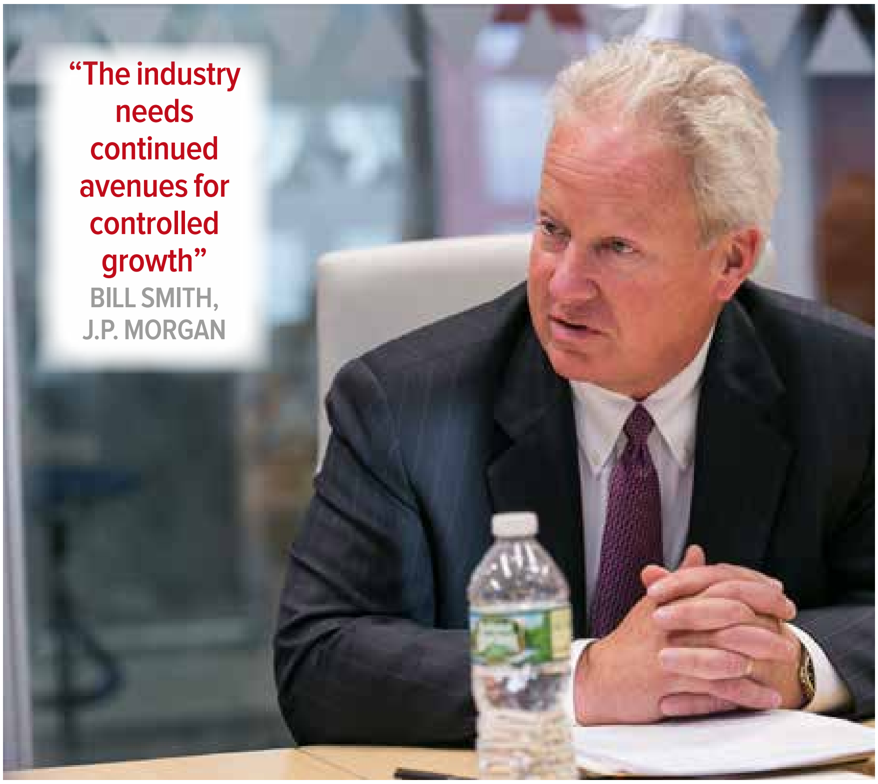
Pollackov: I run a global team that deals with capital markets for the power shares ETFs specifically. In terms of revenue generation from lending for the ETF business alone, actually there is no revenue generation for Invesco shareholders, it's actually a revenue generation for the ETF shareholder. All the proceeds go back to the NAV in terms of reinvesting, except for a small percentage that gets consumed by the actual lending agents that we use as a third party. We're ultra conservative in that space, at least here in the US. We're so conservative in Europe that we stopped doing it in 2016 altogether.

Allen: ETF lending is one area to watch over the next couple of years. The lendable value has increased 50% year-over-year for ETF availability. We recently reviewed ETF activity in our Client Performance Reporting tool, which allows agent lenders to assess beneficial owner clients' program performance, and we saw a 21% increase in the number of accounts enrolled in lending that are now holding ETFs. There are challenges that remain – regulatory, liquidity, settlement concerns – but it is definitely a growth area.

Pollackov: Securities lending requires scale, programmes, compliance and all the associated fund infrastructure and reporting. What we try to think about in the ETF landscape, particularly when it comes to securities lending, is how to differentiate ourselves from our competitors. This means thinking about how to use the proceeds from lending. Some of my competitors use it as a revenue source for their bottom line and their own shareholders as opposed to the ETF shareholders, we try to differentiate ourselves there. From a revenue perspective, international small-caps are important in terms of the spaces where we do the best on returning those numbers back to our ETF shareholders.

Neil: Can you outline examples of changes being made by asset owners to their securities finance activities?

Saunders: The overriding theme is a higher level of engagement from our clients who have an increased level of



"The industry needs continued avenues for controlled growth"
BILL SMITH, J.P. MORGAN

understanding and interest in learning about the market opportunities. Our clients are keen to understand how to better utilise securities lending, collateral management, and securities finances as a whole to their benefit. Its clients looking to be educated about the differences and the opportunities in cash and noncash collateral programmes, as well as clients are seeking a higher level of education that probably best summarizes BNP Paribas's experience in 2017. That's all very positive. It's not everyone, of course. It seems to be once again the sophisticated entities that have a certain risk profile and specific objective.

Kelly: At BNY Mellon we've organised ourselves to recognise the changes occurring in the global collateral services space. There is a greater connection between liquidity, securities finance and collateral. This intersection is where clients are attempting to solve for the new margin rules, segregation rules and liquidity rules related to derivatives, both cleared and OTC. As such, clients need to think about managing their resources in order to optimize their use.

Pate: We are evaluating introducing additional portfolios to lending. In addition, we manage our cash collateral primarily internally. We continue to look at technology to create more risk management and benchmarking. There are a range of new options that seem to come out every year that can bring more clarity to the decision makers, and also help improve programmes or try to generate some additional income. Risk return is key. I'm always asking 'Is the risk I'm taking compensating me correctly?' Some of these analytic programmes and software available help solve that question and allow us to see if someone else may be getting a better risk return than we are.

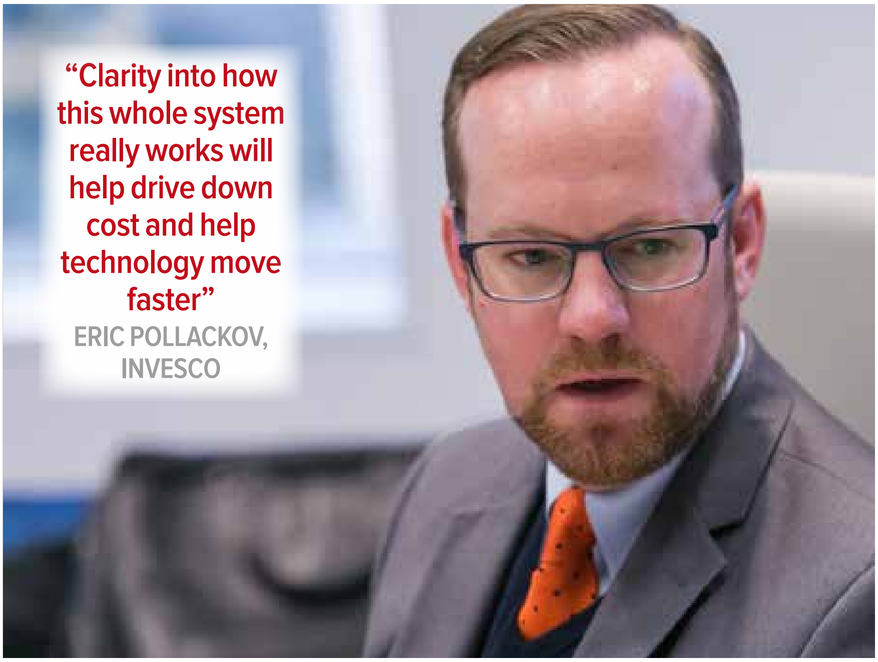
Allen: Over the last couple of years we have seen beneficial owners looking for more data, either through their agent lenders or directly through us. More recently there has been an uptick in the number of beneficial owners allocating budget for data; they are willing to pay for data to help them better manage their programs and extract additional revenue, which more than covers the cost of data. Data and access to data has

certainly improved from an asset owner to an agent lender perspective. Along that food chain there is the opportunity for lots of transparency around levels, activity and just the overall amount of information. This is what regulators are looking for as they assess how big this market is and the interconnectedness associated with the activities that are going on in the securities finance space.

Pollackov: We purchased data in 2017 on the securities lending rates of our products. Previously, we'd get a call from a client to say, 'How much can I short?' and I'd call an agency lending desk and say, 'How much do you have in inventory?' and kind of just mish-mash it together and say, 'Here's what we know.' Now there is more focus on aggregating all of these data points and actually publishing them. We're keen to get our hands on these metrics. I've put budget into this area and will look at products again in 2018.

Smith: It's easier to project which types of portfolios might have a higher likelihood of succeeding, especially if they're new entries into the market. The data shows that, in general terms, the market is heavily oversupplied. In that type of market, you need to find those things which are less oversupplied. We have become more disciplined in the types of portfolios we bid for and how we bid for them. We're trying to make sure that we're adding clients and their portfolios into our programme which we believe have a higher than average likelihood of providing success for that client.

Saunders: Some beneficial owners are also looking to increase the number of providers they have. This trend is not necessarily geographical, it may be based upon specialisation, and some of that may be a willingness to use general collateral as an example, to lend your own collateral, it may be an ability to engage in collateral transformation. At BNP Paribas, we are leveraging our expertise and pursuing those pockets of business. There are differentiating factors amongst providers in today's market each with excelling at certain strategies.



Neil: To what extent would today's beneficial owners continue to participate in the securities lending market without indemnification?

Pate: I can only speak for ourselves. We recognize that there is a cost to indemnification. Our program was approved and designed with indemnification. It is unlikely we would proceed without it. Peers I have spoken with have had a similar reaction.

Sachs: I have run into large investors with the credit resources to do analysis and go direct. However, they are very few and far between. Once you get outside of those mega-funds, indemnification appears to be a requirement for most to participate in securities lending. We don't see indemnification going anywhere.

Kelly: Clients who are engaged and sophisticated enough to have the ability in-house to do the risk assessment can make a determination that, 'If there is a cost to the indemnification and I can secure a fee-sharing arrangement that enhances my return absent the indemnification in exchange for the activity that I'm giving the agent to perform for me, I'm comfortable with that.'

Smith: Most clients still desire to have the benefit of that credit intermediation. It will be interesting to see as time moves forward with CCPs, where asset owners can potentially be direct participants, if this condition continues. If they are dealing with highly rated entities, they might look at that and say, 'Okay, I'm part of this enterprise that's a CCP,' that may provide some comfort somewhere down the road. For the moment, our experience has been that clients are consistently attracted to having the credit intermediation and they value it.

Allen: It depends on the approach the beneficial owner takes to lending and the resources they have dedicated to the practice. Many of the larger beneficial owners, with dedicated internal resources, have always considered lending without credit intermediation. Beneficial owners should weigh the risk against the returns. Not only will the beneficial owner consider the creditworthiness of the counterparty, but they also must be prepared to have the proper controls and procedures in place to manage the operational risk throughout the lifecycle of the loan.

Kelly: We're looking at alternative

borrowers. Traditionally, it was the domain of prime brokers looking to diversify their access to supply. Now lenders are entertaining hedge funds, or perhaps asset owners that are running long-short strategies and Liquid Alts that they may potentially consider lending directly to. It's going to be with the benefit and the confidence of that indemnification where we determine that this is good business and whether it could be helpful for our clients.

Saunders: We've looked at a variety of other initiatives which have the potential to benefit the programme's client experience. Regarding utilising central counterparties or direct lending, our client base just isn't there yet. The mentality and perhaps misconception is one of cost-benefit. We frequently hear; does the legwork at the board or program level justify the benefit especially if program performance is above market average. Of course, our client base is open to these suggestions, especially if increased revenues can still be obtained under a similar risk profile but the immediate question is a) who controls the risk and b) what do I get out of it in terms of revenue?' Those are difficult questions to answer.

Smith: We do have a subset of activity for some of our clients that we do today on a non-indemnified basis. It's a small portion of our business but it is evidence that there are some asset owners in the world who have the wherewithal, whether it be the credit infrastructure and/or the long-term view, to enter into transactions like that if the returns, structure and risk are things they can get comfortable with.

Neil: Has the US securities finance market evolved to reflect efficiency and transparency that can be afforded by modern technology?

Pollackov: We have quarterly meetings with each one of the lenders that we employ to talk about what happened that quarter, what worked, what didn't work, and then of course some portion of the conversation is always dedicated to, 'Hey, what are you doing differently? What's on the horizon? What's going to be better next quarter or next year?' Technology is always part of the conversation for anything that we do.

Pate: On the technology side, you have the third party data providers that are bringing in data analytics that can be used by all parties, they have taken some huge steps that have helped everyone move forward, but there is still a grey area from the beneficial owners' perspective on data, which is the other side of the transaction. If we were to see what the borrower rates with prime brokerage were that would be another level of transparency within data analytics.

Allen: As a fintech company, we see first-hand how the market is embracing technology. EquiLend launched an enhanced trading platform NGT in 2015, and since then we've seen the daily trade flow increase by over 50%. When we look at the US market we're seeing more and more non-GC trades coming through NGT, which means that the market is getting comfortable with managing their warms and their hots in a more automated fashion.

Kelly: We're following the trajectory that Nancy described in terms of take-up on efficiency, recognising shorter settlement cycles and straight through processing, which is going to be absolutely essential – the more the industry drives that, the better. The other aspect is shifting the tasks of trading teams so that they are becoming more analytical, so they're looking at trends, they're looking at patterns, and even artificial intelligence. We're processing over 300,000 transactions a month, and that's just a tremendous amount of trades that we need to keep track of.

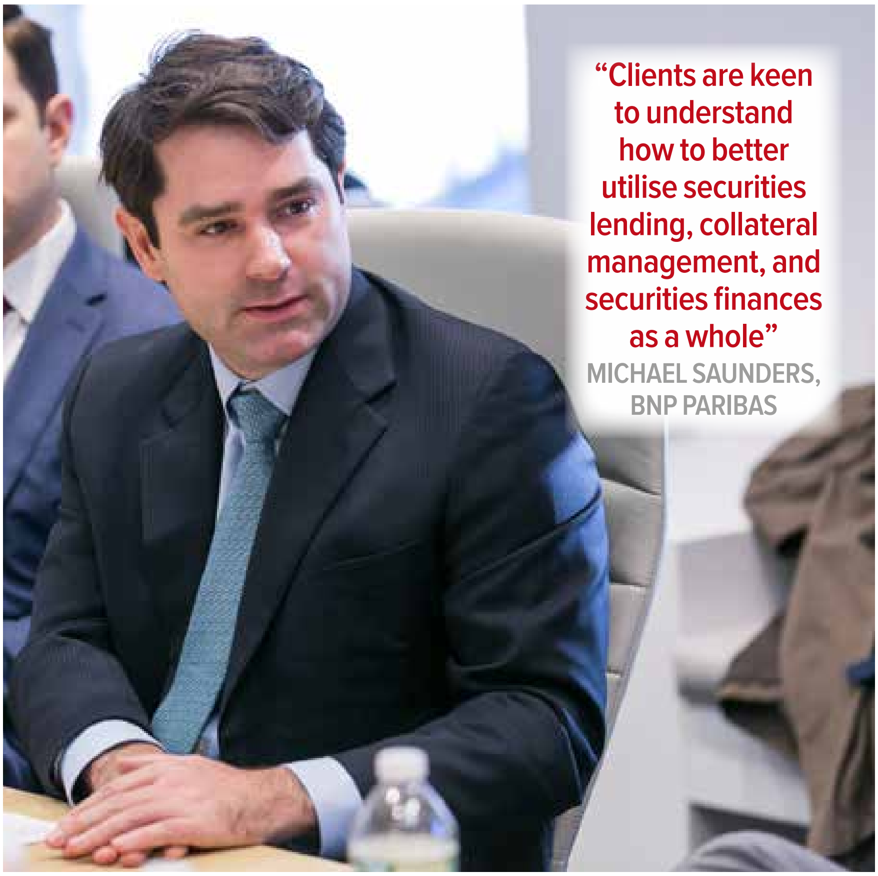
Saunders: BNP Paribas is committed to implementing modern technology to realise increased levels of efficiency and transparency. We have floors and teams of people looking at artificial intelligence and blockchain. We're going in the right direction of course, but we're too large an industry to try to stay ahead of it. Some people say, 'Is a custodial bank really a tech firm?' In the future it probably is. If you're going to look at, even using blockchain as an example, professionals outside the industry are all saying, 'This industry is ideal for that type of technology.'

Neil: What are the most significant direct and potential regulatory impacts on the securities finance industry?

Kelly: Regulatory certainty is something that we all are seeking. What we are also looking for is the avoidance of unintended consequences. It is really about trying to make sure securities finance activity can continue providing liquidity to the marketplace. Now everyone is digging through the finalised Basel III (IV) amendments to try to understand what those really mean. Fundamentally, those amendments are going to provide some additional relief and it appears we're going to get the clarity the industry needs in order to continue providing liquidity to the markets.

Smith: J.P. Morgan has a deeper breadth of service than some of our competitors that focus on financial services or custody and trust businesses, so we always have to look at this through a more multi-faceted lens. What we've seen in terms of the pending/enacted regulation in that in some cases, it's improved the environment for one portion of the bank but may make it more difficult for other portions of the bank. Anything that helps us have longer term regulatory clarity will help us and our clients.

Saunders: We're looking forward to the pause button being hit and getting to a place where there is not a new regulatory challenge every three months. BNP Paribas remains focused on getting our business model to where it needs to be to efficiently utilize our firm's capital. In addition, our counterparties and borrowers can finally get to a place where they're efficiently deploying their capital. I would sense that over the past five or six years it's been back and forth, give and take between agent lenders and the borrower community as all parties analysed how to best maximise capital and their balance sheets in accordance with developing regulations. Whether it's various legal structures, innovative types of transactions, offshore entities, whatever it may be, it's a welcome pause and the market is primed to move forward.



"Clients are keen to understand how to better utilise securities lending, collateral management, and securities finances as a whole"
MICHAEL SAUNDERS, BNP PARIBAS

Pollackov: We acquired a larger business this year that has a large UCITS foundation, and we had a small UCITS business there in the ETF space. That business is mostly swap-based, so there is a whole line of collateralisation that needs to be disclosed. To be quite honest with you, as an asset manager it's a hassle because reporting and monitoring how it gets collected is a real lift. However, it's all available data-wise, so we just have to figure out how to consume it and how to produce it properly and so it complies with the appropriate regulations.

Neil: What impact will Europe's Securities Finance Transactions Regulation (SFTR) have on US market participants?

Kelly: There's going to be a lot of data, because you're going to have two-way reporting with SFTR and it's not going to be symmetrical. It will be interesting to see how regulators determine the interconnectivity of risk. Until you have a single repository of all this transaction information under one jurisdiction, I don't know that the regulators are going to be able to globally accomplish what they hope to accomplish. It's not for lack of trying, it's just the extraterritoriality of the challenges associated with reaching over into this jurisdiction or that jurisdiction.

Saunders: One of the main shifts after 2009/10 has been the insatiable appetite from clients for more data and greater transparency. BNP Paribas has met this challenge and invested heavily in providing a plethora of data to program participants in a variety of formats. Because of our transparency initiative, the impact of SFTR was not substantial in terms of changing our mentality of transparency. Under SFTR, now we're taking that data and sharing it with a wider audience. However, SFTR has a cost associated with it which will need to be addressed at the client level as clients may not have a full grasp on the heavy lift placed on the industry to share this information.

Allen: Market participants should be thinking about what they can do with the data once it goes to the regulator—specifically what benefits they can reap from the resulting standardised and more-timely data, which they can use for better data analytics. That is one of the positives that will come out of SFTR. Also, while the market is going to have to produce the data to comply with the regulation, which will come at a cost, if you look longer term hopefully it will reduce some of the manual processes and be a cost saver over time.

Smith: It's too soon to tell how the specifics of SFTR will affect loan balances. There's an awful lot of other variables that go into that. It's also too soon to assess how STFR will impact US clients and their loan programs. SFTR will certainly require a significant amount of tech investment by market participants, including lending agents, as the scale of the data reporting requirement is going to be extremely large.

Sachs: SFTR may be a very big cost for the industry, which means there may be big upfront costs for all parties. The question is, what comes out of that in terms of improved productivity, and what's the lag of that? Is that a 3-year lag or is it an 8-year lag? I do believe that there is going to be a benefit but it might be painful upfront.

Neil: What factors will compel clearing activity and increased transparency in the US market?

Allen: We established the EquiLend Clearing Services (ECS) business to make connectivity to the CCPs easier for the market. The benefits of CCPs are primarily regulatory driven and include balance sheet optimisation, lower risk-weighted assets (RWA) and netting, which frees up balance sheet for additional business as well. It will be interesting to see when and how beneficial owners get involved in that trade and what will incentivize them to start trading through their agent to a CCP. The economics have to make sense, and the CCPs need to really demonstrate that they have the operational procedures and controls in place. Our ECS business continues to grow, and we're looking at offering connectivity to CCPs all over the globe, so it's a space to watch for us.

Pate: As direct lending increases and economics reduce for GC lending, I think more beneficial owners will transition to CCP.

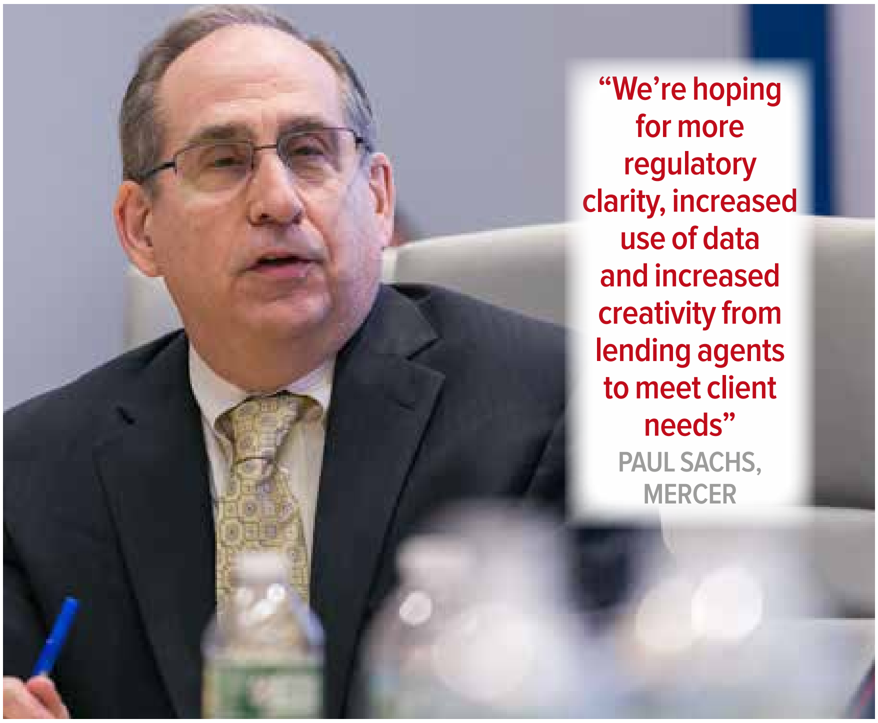
Pollackov: We are putting our clients' portfolios at risk, potentially. We need to think about what's the cost-benefit analysis of putting that portfolio at risk, and is it enough to make our shareholders happy? With that being said, I completely echo Mike's point, we want to be the second through the door, not the first.

Sachs -Two questions right away: 'Who is servicing over the life of the loan?' and 'What happens to indemnification?' The devil is in the details when it comes to indemnification and servicing. These are not easy problems to solve.

Kelly: I would agree that the incentives to clear include improved pricing in terms of capital relief and the efficiency from a balance sheet optimisation standpoint. That should drive adoption, but the challenge is coming up with the model that the CCPs need to develop so that it can work in concert with the agent model. Financial incentives have been established for SFTs, whereas clearing for derivatives was an edict. It's fascinating that regulators took two different paths.

Smith: There still are question marks around what the model can and will look like. It's different to insert an agent in the middle of the way beneficial owners would connect with a CCP. The risk disaggregation model or aggregation model, whichever way you look at it, is important. In addition, in agency transactions the degree to which you're going to unlock all the benefits of netting is also part of the

"ETF lending is one area to watch over the next couple of years"
NANCY ALLEN, DATALEND



question. It's easy to talk about the value of netting, and certainly the borrowers' side loves to net and bring down their costs, but you've got this agent layer in the middle here, and will that impact netting opportunities? That said, the CCP model is certainly something which demonstrates an opportunity for value; it's certainly something that the regulators seem to have identified as serving a viable purpose.

Saunders: BNP Paribas has a dedicated work stream analysing the role of CCP's in our securities financing businesses. We envision a role of CCP's in the future, but many questions remain unanswered. We will continue to conduct our due diligence and monitor the industry developments.

Neil: What's the long-term strategic direction of the business and how can beneficial owners position for success?

Smith: The industry needs continued avenues for controlled growth. Firms also need to see returns on investments and technology. This is well underway; however, those returns come closer to the end of the cycle than the beginning or middle. If we have a clear and stabilised regulatory environment then everyone can stop trying to focus on interpreting the regulations and start trying to focus on how to make the business generate value for the clients operating within that regulation. The lending business continues to go through transition and reinvent itself, and it's made some good progress. The accessibility of data and technology transformation can't be anything but good things. Turning change into value and monetising it for all the players involved is key.

Allen: The market continues to move towards more balance sheet-efficient structures; to that end, we will continue to see more automation, alternative routes to market, the need for greater flexibility and more transparency. Beneficial owners have become much more involved in their lending programs in recent years, and I expect that trend to continue, especially as data becomes even more enriched by market changes like SFTR regulation. To navigate the future, beneficial owners should take advantage of the availability of data to ensure they have structured a program that will optimise their returns while adhering to their own risk parameters.

Kelly: Active engagement and staying close to the developments on the policy and regulatory front will be important. With policy certainty, capital might move back to being deployed in certain strategies which will inevitably drive demand and drive a modicum of sustainable and manageable volatility. If you believe the soothsayers about the collateral shortfall of $2 to $6 trillion, the securities lending marketplace is a good outlet to provide liquidity to meet that demand.

Pollackov: This market is still relatively opaque. It's opened up somewhat but clarity into how this whole system really works will help drive down cost and help technology move faster. As an asset manager that's managing almost $1 trillion, a couple of basis points starts to add up. Those are the types of things we're trying to focus on for our shareholders.

Pate: Traditionally, securities lending has been a market where periods of low interest rates and benign credit have led firms to take-on more risk. This is probably the best time to stick to your knitting. Conservative cash collateral and intrinsic spread risk management.

Saunders: At BNP Paribas, we will continue to be client-centric and focus on maximizing the experience of our program participants. We will leverage the expertise and financial strength of our global institution to grow our industry presence in a focused, selective nature. The bank will continue to maximise market opportunities in a customised, risk-controlled fashion to keep clients engaged while growing our market share.

Sachs: We're hoping for more regulatory clarity, increased use of data, increased creativity shown by lending agents in terms of trying to meet client needs. Those are all positives for asset owners. I feel like we're in an unusual period with the VIX being so low. One thing about capital markets is that they continue to surprise you. A couple of years from now things will be different.

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

We understand that by serving our clients well, our own success will follow.

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