

GLOBAL INVESTOR



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GLOBAL CUSTODY SURVEY 2020

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Global Custody Survey 2020

- methodology

SYNOPSIS

Asset managers, asset owners and banks are asked to rate their global custodians.

Results for custodians that qualify will be published regardless of whether or not they actively participated in the survey.

CATEGORY TABLES

There are 21 service category tables. Each of these categories is broken down into sub-categories, on which the global custodians are actually rated by respondents

Respondents are asked to rate their global custodians from 1 (very poor) to 7 (flawless) in each of the sub-categories (see list below). The scores of these sub-categories are combined to create an overall score for that service category.

For example, for the tax services category, respondents are asked to rate global custodians in three sub-categories: efficiency of obtaining tax relief at source; efficiency of reclaiming taxes; and solicitation of timely tax documentation. Each of the sub-categories is given an equal weighting and combined to create a table for tax services to be published in the magazine.

The all responses category tables, both raw data and weighted, will appear in the magazine, but others such as for multiple custodian may only be available online.

HEATMAP TABLES

The overall tables are presented in the 'heatmap' format this year. Global custodians' results are presented in alphabetical order with the winning score in each column highlighted. There are two global columns – global total and global average. There are three regional columns for EMEA, the Americas and Asia Pacific (defined by where the respondent is based).

There will be at least six heatmap tables published in the magazine:

- All responses (weighted & raw data)
- Multiple custodian (weighted & raw data)
- Single custodian (weighted & raw data)
- Other heatmaps are published at the discretion of Global Investor/ISF, depending on the editorial value they represent, in print and/or online

HEATMAP CALCULATION METHODS

Raw data

The Raw data tables (labelled unweighted in previous surveys) simply contain an average of the relevant scores of the category tables (which are themselves averages of the sub-category scores). Each category is assigned an equal weighting, regardless of how many sub-categories there are for that category or how important they are considered by respondents.

Weighted

The weighted tables contain a two stage calculation process for the first time, combining stages that allow for the respondents AuM and the importance that the respondents attach to each service category.

Stage 1: Weighted by AuM: The first stage attributes greater weight to the ratings of respondents with larger amount assets under management (AuM). Each respondent is put into a quartile depending on its AuM. 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 respondents received in this year's survey, the boundaries are unknown until the survey closes.

Note: This stage is the entire methodology of the weighted service category tables (as category importance is not relevant) and is the first stage of creating the weighted overall tables. The weighted category tables are published in print and online.

Criteria	Weighting
AuM in lowest quartile	0.5
AuM in middle two quartiles	1
AuM in the top quartile	1.5

Stage 2: Weighted by category importance. The respondents are asked to rank the service categories (not sub-categories) in order of importance. The core and value added categories are mingled in this list (i.e. some value added services may be considered more important than some core categories). An average is then created based on the rankings of all respondents. These weightings are then applied to the weighted (by AuM) service category tables to create the overall weighted tables.

The more important a category is considered, on average by all respondents, the greater the weight is attached to that category (and by extension all the sub-category scores in that category). Weightings are normalised around 1 to preserve comparability with the raw data scores.

QUALIFICATION CRITERIA

All responses tables

To be included in the global average and global total columns, a global custodian needs to qualify in at least two

geographical regions. Global custodians need to receive a minimum number of respondents to qualify for a region: 7 in the Americas; 7 in Emea; and 3 in Asia Pacific.

Multiple custodian tables

Only scores from respondents that deal with more than one custodian are included. To qualify for the global columns, a minimum of 6 responses and qualification in two regions is required. 3 responses are required for each of the regional columns.

Single custodian tables

Only scores from respondents that deal with one custodian are included. A minimum of 4 responses and qualification in two regions is needed to qualify for the global columns. 2 is required for each of the regional tables.

Bank/Broker Dealer, Mutual Fund/UCITS, Hedge Fund, Insurance Company, Pension Fund

A minimum of 4 responses and qualification in two regions is required to qualify globally. 2 responses are needed to qualify for a region. Scores from respondents that deal with multiple custodians and single custodians are included. Global Investor/ISF reserves the right to publish whichever tables it deems appropriate.

Respondents with AuM greater than \$3bn tables

Only scores from respondents with assets under management of more than \$3bn are included. A minimum of 6 responses and qualification in two regions is needed to qualify for the global columns. 3 is required for each of the regional tables.

Respondents with AuM less than \$3bn tables

Only scores from respondent with assets under management of less than \$3bn are included. A minimum of 6 responses and qualification in two regions is needed to qualify for the global columns. 3 is required for each of the regional tables.

Category tables

To qualify for a category a global custodian must reach the qualification criteria for the relevant heatmap table, i.e. for the all responses category table a global custodian must qualify in two regions. A respondent must rate the custodian in one or more of the sub-categories for it to be considered a legitimate response for the purposes of qualification for that category.

Valid responses

If different people from the same entity in the same region rate the same global custodian the responses are treated as a single grouped response for the purposes of qualification. The two or more responses are averaged (where only one respondent rated the firm in for a particular sub-category this score is used unchanged).

CATEGORIES

Category (table published)	Sub-category (respondent rates)
Settlements	Efficiency of pre-settlement matching and reporting Failed trade management Straight through processing efficiency Competitiveness of cut off times Provision and scope of contractual settlements
Corporate Actions	Accuracy and timeliness of notifications Proxy voting services Provision of standing instructions Competitiveness of response cut off times
Income Collections	Accuracy and quality of income processing Quality of the assured income programme (contractual settlement income programme) Responsiveness and effectiveness of problem solving
Cash Management	Competitiveness of rates Integration of cash products (pooling, target balances etc) with custody solution (n/a for third-party relationships) Competitiveness of cut off times
Tax Services	Efficiency of obtaining tax relief at source Efficiency of reclaiming taxes Solicitation of timely tax documentation (n/a for third-party relationships)
Class Actions	Efficiency of reporting events Quality and efficiency of processing and paying proceeds
Reporting	Flexibility of delivery channels Quality and timeliness of Swift and other reporting Data strategy – near real time activity updates and enhanced activity throughout lifecycle
Client Services	Quality of subject matter expertise Responsiveness and effectiveness of enquiry management Availability and calling frequency
Relationship Management	Understanding of your business needs Ability to identify new product needs and solutions Quality of subject matter expertise Responsiveness and effectiveness of enquiry management
Network	Quality and timeliness of market information Access to market expertise Quality of network management resources Network management risk – monitoring sub-custodian credit risk and regulatory compliance
Risk Management	Credit risk Regulatory risk Market risk Information risk
Commission Recapture	Quality of services
Foreign Exchange Services	Competitiveness of rates offered Transparency of rates provided Transparency of reporting Quality of automated FX solutions
Fund / Investment Accounting	Quality & timeliness of NAV processing Quality of reporting
Performance Measurement	Quality of performance measurement services Timeliness and flexibility of reporting
Derivatives	Quality of exchange traded services Quality of OTC services
Industry Knowledge & Influence	Quality of reporting of regulatory changes and impacts Quality of subject matter expertise Engagement and leadership in shaping market practices and regulation
Execution Services	Quality and expertise in execution to custody services Quality of execution processing and reporting
Safety of client assets	Quality and performance of depository function
Innovation & Technology Investment	Distributed ledger technology Big data Cyber security Robotics process automation
Covid/Crisis Management	Operation resilience in crisis scenario Provision of regular market insights during covid crisis Support of client service, network and operational staff during covid crisis.

Note: Where a respondent ticks the n/a box, the sub-category is ignored when calculating the category score (i.e. for derivatives, if the respondent gives a score of 5 for quality of exchange traded services and ticks n/a for quality of OTC services, the score for derivatives is 5).

JP MORGAN

JP Morgan has won the coveted weighted category for 2020, marking the second year of success for the firm. The US bank had the highest average score of the various firms that qualified in all three regions of EMEA, the Americas and Asia. The bank had a global total of 20.68 and an average of 7.00.

JP Morgan's success was due to a strong performance in EMEA where it came second with 6.88, narrowly behind HSBC, and in the Americas where the bank won that region comfortably with a score of 7.64. JP Morgan also performed well in Asia where it came fourth with a score of 6.16 behind HSBC, Northern Trust and Citi.

JP Morgan was also rated best when weighted by firms that use multiple custodians, scoring 7.31, ahead of HSBC

in second and BNY Mellon in third. The US bank was also top in the weighted category when scored by pension funds, beating HSBC into second.

Last year JP Morgan achieved an average global score of 7.54 in the overall weighted table, climbing to the top of the rankings on the back of strong scores in EMEA (7.71) and Asia Pacific (7.19). 2019 was the second year in a row that the bank had been ranked as the highest performer in EMEA in the overall weighted table.

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OVERALL (WEIGHTED)					
COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas	4.64		5.20	9.84	5.09
BNY Mellon	6.02	7.04	5.57	18.63	6.58
Citi	6.32	6.50	6.34	19.16	6.39
HSBC	6.99		7.09	14.08	7.05
JPMorgan	6.88	7.64	6.16	20.68	7.00
Northern Trust	5.20	4.92	6.78	16.90	5.33
Pictet	5.76	5.38	5.57	16.71	5.65
RBC Investor & Treasury Services	4.63	3.86	4.55	13.04	4.27

OVERALL (UNWEIGHTED)					
COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas	5.39		5.13	10.52	5.47
BNY Mellon	5.47	6.02	6.60	18.09	5.90
Citi	5.86	5.95	5.08	16.89	5.75
HSBC	6.11		5.99	12.10	6.03
JPMorgan	5.76	5.81	5.34	16.91	5.73
Northern Trust	5.38	5.76	5.42	16.56	5.59
Pictet	6.39	6.25	6.78	19.42	6.39
RBC Investor & Treasury Services	6.26	5.83	6.83	18.92	6.16

OVERALL SERVICE CATEGORIES (WEIGHTED)						
COMPANY NAME	CASH MANAGEMENT	CLASS ACTIONS	CLIENT SERVICES	COMMISSION RECAPTURE	CORPORATE ACTIONS	COVID CRISIS MANAGEMENT
BNP Paribas					4.84	
BNY Mellon	6.34	6.26	6.77	6.00	6.42	6.76
Citi	5.95		6.42		6.36	6.77
HSBC	6.83		7.40		7.14	7.74
JPMorgan	6.39	6.67	7.20			7.22
Northern Trust	5.04	5.33	5.51	5.83	5.88	5.81
Pictet	4.83		5.78			5.54
RBC Investor & Treasury Services	3.70		4.17		4.17	4.31

OVERALL SERVICE CATEGORIES (UNWEIGHTED)						
COMPANY NAME	CASH MANAGEMENT	CLASS ACTIONS	CLIENT SERVICES	COMMISSION RECAPTURE	CORPORATE ACTIONS	COVID CRISIS MANAGEMENT
BNP Paribas					5.27	
BNY Mellon	5.73	5.86	6.17	5.65	5.89	6.15
Citi	5.55		5.86		5.70	6.23
HSBC	5.97		6.32		6.10	6.56
JPMorgan	5.37	5.37	5.94			5.96
Northern Trust	5.22	5.52	5.76	5.80	5.78	5.98
Pictet	6.02		6.75			6.43
RBC Investor & Treasury Services	6.00		6.21		5.97	6.39

HSBC

HSBC improved significantly its score in EMEA to 6.99 from 6.59 last year in the overall weighted group, and came top in the Asia Pacific region in the overall weighted list with 7.09, comfortably beating Northern Trust in second with 6.78. The British banking group recorded a global total (comprising its scores in EMEA and Asia Pacific) of 14.08 and an average of 7.05, which were both slightly down on last year.

HSBC came top in the weighted cash management, client services, corporate actions, Covid crisis management, innovation and technology investment, network, performance measurement, risk management and safety of client

assets lists.

The group also came second in the weighted Asia Pacific section for clients with multiple assets and had the second highest average in this category of 7.09.

HSBC was also second in EMEA in the weighted section of the single custodian table, scoring 6.69 behind Citi-group's 7.09.

Last year, HSBC performed well across the regional categories for EMEA and Asia Pacific. It came in first place in the multiple custodian weighted table in Asia Pacific (7.92) and second in EMEA (6.99); and first in Asia Pacific and second in EMEA for the assets under management greater than \$3 billion weighted table, with scores of 8.18 and 7.28, respectively.

OVERALL SERVICE CATEGORIES (WEIGHTED)					
COMPANY NAME	DERIVATIVES	EXECUTION SERVICES	FOREIGN EXCHANGE SERVICES	FUND ACCOUNTING INVESTMENT ACCOUNTING	INCOME COLLECTIONS
BNP Paribas					4.91
BNY Mellon	6.32	6.69	5.98	6.15	6.42
Citi		6.36	5.90		6.51
HSBC					7.06
JPMorgan		7.15	6.99	6.19	7.21
Northern Trust		5.41	5.28	5.30	5.55
Pictet		5.28	4.53	5.02	5.39
RBC Investor & Treasury Services					3.98

OVERALL SERVICE CATEGORIES (UNWEIGHTED)					
COMPANY NAME	DERIVATIVES	EXECUTION SERVICES	FOREIGN EXCHANGE SERVICES	FUND ACCOUNTING INVESTMENT ACCOUNTING	INCOME COLLECTIONS
BNP Paribas					5.42
BNY Mellon	5.68	6.07	5.52	5.88	5.88
Citi		5.71	5.18		5.87
HSBC					6.00
JPMorgan		5.83	5.51	5.53	5.85
Northern Trust		5.68	5.39	5.57	5.77
Pictet		6.42	5.87	6.42	6.58
RBC Investor & Treasury Services					6.32

OVERALL SERVICE CATEGORIES (WEIGHTED)					
COMPANY NAME	INDUSTRY KNOWLEDGE & INFLUENCE	INNOVATION & TECHNOLOGY INVESTMENT	NETWORK	PERFORMANCE MEASUREMENT	RELATIONSHIP MANAGEMENT
BNP Paribas					
BNY Mellon	6.37	6.21	6.33	5.99	6.82
Citi	6.36	5.97	6.56		6.51
HSBC	7.01	7.02	7.17	6.72	7.31
JPMorgan	7.09	6.95	7.17		7.40
Northern Trust	5.57	5.32	5.45		5.52
Pictet	5.16	5.04	5.32		5.64
RBC Investor & Treasury Services	4.06		3.96		4.15

OVERALL SERVICE CATEGORIES (UNWEIGHTED)					
COMPANY NAME	INDUSTRY KNOWLEDGE & INFLUENCE	INNOVATION & TECHNOLOGY INVESTMENT	NETWORK	PERFORMANCE MEASUREMENT	RELATIONSHIP MANAGEMENT
BNP Paribas					
BNY Mellon	5.81	5.72	5.79	5.91	6.23
Citi	5.88	5.43	5.91		6.02
HSBC	5.98	6.05	6.03	6.09	6.23
JPMorgan	5.80	5.63	5.92		6.11
Northern Trust	5.60	5.59	5.52		5.84
Pictet	6.38	6.36	6.39		6.61
RBC Investor & Treasury Services	6.25		5.96		6.26

OVERALL SERVICE CATEGORIES (WEIGHTED)					
COMPANY NAME	REPORTING	RISK MANAGEMENT	SAFETY OF CLIENT ASSETS	SETTLEMENTS	TAX SERVICES
BNP Paribas					4.60
BNY Mellon	6.74	6.32	6.78	6.57	5.90
Citi	5.97		7.00	6.47	5.80
HSBC	6.74	6.88	7.63	7.18	
JPMorgan	6.94		7.21	7.28	6.53
Northern Trust	5.35	5.54	5.74	5.27	5.28
Pictet	5.46	4.56	5.16	5.50	
RBC Investor & Treasury Services	4.00		4.31	4.30	

OVERALL SERVICE CATEGORIES (UNWEIGHTED)					
COMPANY NAME	REPORTING	RISK MANAGEMENT	SAFETY OF CLIENT ASSETS	SETTLEMENTS	TAX SERVICES
BNP Paribas					5.13
BNY Mellon	6.16	5.92	6.17	6.02	5.42
Citi	5.49		6.32	5.97	5.12
HSBC	5.82	5.91	6.45	6.15	
JPMorgan	5.67		5.96	5.94	5.33
Northern Trust	5.56	5.55	5.97	5.56	5.40
Pictet	6.46	6.19	6.50	6.48	
RBC Investor & Treasury Services	5.94		6.32	6.33	

BNY MELLON

BNY Mellon was second in the overall weighted category when ranked against other firms that qualified in each of the three regions. BNY Mellon scored an average of 6.58 and a global total of 18.63, which put it behind JP Morgan. This performance was linked to solid scores across the regions. BNY Mellon came fourth in EMEA with 6.02, second in Americas with 7.04 and joint fourth in Asia with 5.57.

The US custodian was ranked top among peers in the weighted list for commission recapture and derivatives, and second for reporting and tax services. BNY Mellon was also ranked top in the weighted category for Americas with 7.23 and second in EMEA with 6.68 where clients use multiple custodians. The bank was also top-ranked in the weighted category by European pension funds and in the Americas by mutual funds.

BNY Mellon claimed last year top spot in the weighted overall table when it came to the highest total global score (19.05). In 2019, it was also the most highly-ranked global custodian in the Americas (8.20), maintaining the leading position it achieved in this region in 2018.

The US custodian was ranked top among peers in the weighted list for commission recapture and derivatives, and second for reporting and tax services.

PICTET

Pictet followed last year's success in the unweighted lists, which give equal importance to all clients, with another strong performance in 2020. Pictet had the highest unweighted average at 6.39, the highest global total of 19.42, won in EMEA and Americas with 6.39 and 6.25 respectively, and came narrowly second to RBC Investor & Treasury Services in Asia Pacific with 6.78.

Among the service categories, Pictet won cash management with 6.02, client services with 6.21, execution services with 6.42, foreign exchange services with 5.87, fund accounting and investment accounting with 6.42, income collections with 6.58, industry knowledge and influence with 6.36, network with 6.39, relationship management with 6.61, reporting with 6.46, risk management with 6.19, safety of client assets with 6.50 and settlements with 6.48.

Pictet was the top-rated custodian in the unweighted category in EMEA and the Americas among firms that use multiple custodians, with scores of 6.40 and 6.25 respectively. The bank also had the highest global total of the firms that qualified in two regions and the highest average overall in the unweighted multiple custodian category.

Last year Pictet swept the board in the unweighted service categories, taking the top spot in all 16 functions. It also came out on top in the overall unweighted table, scoring 6.57 in the Americas and 6.75 in Asia Pacific, as well as the highest global total score (19.53) and the highest average score (6.4).

Pictet followed last year's success in the unweighted lists

MULTIPLE CUSTODIAN (WEIGHTED)

COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas	5.04				5.30
BNY Mellon	6.68	7.23		13.91	7.01
Citi	5.67	6.40	6.34	18.41	6.15
HSBC			6.97		7.09
JPMorgan	7.88	6.90		14.78	7.31
Northern Trust	5.47	5.50	6.54	17.51	5.78
Pictet	6.65	5.38		12.03	6.32
RBC Investor & Treasury Services	5.24	4.82		10.06	5.05
State Street	3.65	4.28		7.93	4.26

MULTIPLE CUSTODIAN (UNWEIGHTED)

COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas	5.52				5.49
BNY Mellon	5.50	5.87		11.37	5.83
Citi	5.59	5.74	5.08	16.41	5.52
HSBC			6.01		6.06
JPMorgan	5.74	5.34		11.08	5.58
Northern Trust	5.25	5.72	5.42	16.39	5.48
Pictet	6.40	6.25		12.65	6.36
RBC Investor & Treasury Services	6.15	6.08		12.23	6.12
State Street	4.60	3.73		8.33	4.32

SINGLE CUSTODIAN (WEIGHTED)

COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNY Mellon	4.82	6.70	4.43	15.95	5.83
Citi	7.09	6.75		13.84	6.96
HSBC	6.69				6.96
JPMorgan	5.46	8.62		14.08	6.54
Northern Trust	4.67	4.55		9.22	4.80
Pictet	4.70		3.36	8.06	4.48
RBC Investor & Treasury Services	3.10	2.90	4.55	10.55	3.50

SINGLE CUSTODIAN (UNWEIGHTED)

COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNY Mellon	5.42	6.30	6.27	17.99	6.02
Citi	6.17	6.49		12.66	6.29
HSBC	6.02				5.97
JPMorgan	5.80	6.45		12.25	5.95
Northern Trust	5.63	5.78		11.41	5.73
Pictet	6.37		6.80	13.17	6.44
RBC Investor & Treasury Services	6.53	5.59	6.83	18.95	6.21

MUTUAL FUND/UCITS (WEIGHTED)

COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas			5.26		5.31
BNY Mellon		7.39			7.39
Citi	5.10				5.61
HSBC			6.20		6.20
JPMorgan	7.22				7.78
Northern Trust		6.56	8.24	14.80	7.23
Pictet	6.97				7.88
RBC Investor & Treasury Services	4.67				5.13
State Street		6.21			6.21

MUTUAL FUND/UCITS (UNWEIGHTED)

COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas			5.23		5.76
BNY Mellon		6.71			6.71
Citi	5.75				5.59
HSBC			5.20		5.20
JPMorgan	5.87				6.08
Northern Trust		5.71	5.61	11.32	5.67
Pictet	6.90				6.88
RBC Investor & Treasury Services	6.60				6.57
State Street		5.26			5.26

CITI

The US bank showed strong improvements in the overall weighted section. Citigroup scored 6.32 in EMEA this year compared to 5.70 last year and was rated 6.34 in Asia Pacific in 2020 compared to 5.92 last year. The bank's global total was 19.16 which left it second only to JP Morgan's 20.68 and was an improvement on last year's 18.97. Citigroup's global average also increased to 6.39 from 6.37 in 2019.

Citi was rated third in the weighted lists of functions for Covid crisis management, execution services, foreign exchange services, income collection, industry knowledge and influence, network, safety of client assets and tax services.

Citigroup performed particularly strongly among clients that use a single custodian. It was top in EMEA and second in the Americas, and had the joint highest average of 6.96 with HSBC.

Citi was top in EMEA and second in the Americas, and had the joint highest average of 6.96 with HSBC.

The US banking group also recorded the highest global total in the weighted multiple custodian category, scoring 18.41. Among clients that use multiple custodians, Citi was third in the Americas and Asia Pacific.

In 2019, among respondents that utilise a single custodian, Citi was seen as the top provider in EMEA (5.86), up from fourth place in 2018's survey. It also overtook four other custodians over the year to gain the highest average score and highest global total score among mutual funds in 2019's unweighted table.

NORTHERN TRUST

The US banking group recorded a strong weighted overall score in Asia of 6.78, which put Northern Trust behind only HSBC in that region.

This performance left Northern Trust's global total at 16.90 as its average fell slightly this year to 5.33 from 5.65 in 2019.

Northern Trust also recorded the second highest global total in the weighted multiple custodian category with 17.51. The banking group was also second in EMEA weighted group for clients that use a single custodian.

ASSETS UNDER MANAGEMENT GREATER THAN \$3BN (WEIGHTED)					
COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas	7.23		5.20	12.43	6.46
BNY Mellon	6.60	7.34		13.94	7.04
Citi	7.18	7.37	6.34	20.89	7.07
HSBC	6.99		7.45	14.44	7.27
JPMorgan	7.16	7.64	6.16	20.96	7.17
Northern Trust	5.92	6.59	6.78	19.29	6.42
Pictet	7.17	6.69		13.86	7.19
RBC Investor & Treasury Services	6.54				6.39
State Street		4.28			4.68

ASSETS UNDER MANAGEMENT GREATER THAN \$3BN (UNWEIGHTED)					
COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas	5.26		5.13	10.39	5.46
BNY Mellon	5.55	5.96		11.51	5.84
Citi	5.90	6.21	5.08	17.19	5.84
HSBC	6.11		6.06	12.17	6.08
JPMorgan	5.82	5.81	5.34	16.97	5.77
Northern Trust	5.41	5.61	5.42	16.44	5.49
Pictet	6.21	6.14		12.35	6.22
RBC Investor & Treasury Services	5.98				5.90
State Street		3.73			4.14

ASSETS UNDER MANAGEMENT LESS THAN \$3BN (WEIGHTED)					
COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas	2.69				2.69
Citi	4.01				3.43
Northern Trust		3.59			3.44
Pictet	3.29	3.19		6.48	3.28
RBC Investor & Treasury Services	3.19	3.09	4.55	10.83	3.46

ASSETS UNDER MANAGEMENT LESS THAN \$3BN (UNWEIGHTED)					
COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas	5.48				5.48
Citi	5.75				5.36
Northern Trust		5.87			5.77
Pictet	6.69	6.42		13.11	6.64
RBC Investor & Treasury Services	6.46	5.85	6.83	19.14	6.26

The US banking group recorded a strong weighted overall score in Asia of 6.78

Northern also had this year the second highest overall average in the weighted list of custodians rated by clients with under \$3bn under management, that is smaller custody clients.

In 2019, Northern Trust had the highest global total score in the unweighted table for respondents with more than \$3 billion worth of assets under management. It also performed well in Asia Pacific, taking third place in the multiple custodian weighted table (6.95) and fourth place in the overall weighted table (6.87).

BNP PARIBAS

The French banking group improved its performance in Asia Pacific where it scored 5.20 in the overall weighted group this year compared to 4.93 last year. BNP Paribas also scored 4.64 in EMEA leaving it with a global total of 9.84 and an average of 5.09.

BNP came third in the unweighted category relating to firms providing custodial services to bank or broker dealer clients and was top-ranked among weighted custodians supplying services to clients with assets under management of greater than \$3bn with a score of 7.23.

Last year, BNP Paribas received solid scores across the EMEA region. This includes the overall unweighted table (5.38), multiple custodian unweighted table (5.39), single custodian unweighted table (5.37), mutual fund/UCITs unweighted table (5.42), and the AuM greater than \$3 billion weighted table (5.74).

RBC INVESTOR & TREASURY SERVICES:

RBC Investor & Treasury Services returned a strong performance in unweighted overall categories with 6.26 in EMEA, 5.83 in the Americas and 6.83 in Asia Pacific, which was up from 5.89 last year. RBC Investor & Treasury Services had an unweighted global total of 18.93, which was up from 18.59 last year, and an average of 6.16, which put it second behind Pictet.

RBC Investor & Treasury Services came second behind Pictet in several unweighted categories including cash management, corporate actions, income collections, industry knowledge and influence, relationship management and settlements.

RBC Investor & Treasury Services came second in the unweighted category for firms that use multiple custodians for the overall average and in EMEA and the Americas. RBC also was top in EMEA and Asia Pacific in the unweighted category for firms that use a single custodian.

The Canadian banking group was top in the unweighted list when rated by Asian pension funds and European banks and broker-dealers.

Last year RBC scored the highest global total in both the weighted and unweighted single custodian tables. In the latter, the bank was also recognised as top in the regional EMEA and Americas categories, with 6.43 points in each.

STATE STREET

State Street scored 4.60 in EMEA and 3.73 in the Americas in the unweighted multiple custodian category, and 3.65 in EMEA and 4.28 in the Americas in the weighted equivalent for clients that use multiple custody providers.

The US banking group also scored 5.26 in the unweighted category and 6.21 in the weighted list in the Americas when rated by mutual fund clients. ■

The Canadian banking group (RBC Investor & Treasury Services) was top in the unweighted list when rated by Asian pension funds and European banks and broker-dealers.

BANK/BROKER DEALER (WEIGHTED)					
COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas	2.87				2.87
BNY Mellon	4.27				5.12
Citi	4.66	4.11		8.77	4.39
HSBC			5.24		5.49
Pictet	4.88				4.88
RBC Investor & Treasury Services	5.29				5.29

BANK/BROKER DEALER (UNWEIGHTED)					
COMPANY NAME	EMEA	AMERICAS	ASIA-PACIFIC	GLOBAL TOTAL	AVERAGE
BNP Paribas	5.87				5.87
BNY Mellon	5.51				6.01
Citi	5.82	5.21		11.03	5.52
HSBC			6.33		6.21
Pictet	6.51				6.51
RBC Investor & Treasury Services	6.82				6.82