

Fund Custodian
League Tables

Global Funds and AUA

Reporting Period
Oct 2021 - Oct 2022



CONVERGENCE
OPTIMAL PERFORMANCE

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About this League Table Report

- Our League Tables leverage the most comprehensive database of active funds and advisers in the market. Convergence is the only firm to have a complete set of advisers and funds including:
 - SEC registered private and public funds and advisers
 - State registered private and public funds and advisers
 - Unregistered private funds and advisers
 - EU UCITS and private funds
 - Non-pooled investment entities
- This report includes all US and non-US funds and is divided into 3-Section
 - Funds that use one or more custodians
 - Funds that use a “single” custodian
 - Funds that use “multiple” custodians
- Additional Fund custodian League Tables for custodian Funds and AUA are available to Convergence Clients in the following cuts:
 - Private Funds, and within private funds, in the following sub-cuts
 - Hedge, Private Equity, Real Estate, Venture Capital, Securitized Assets, Hybrid and Liquidity Funds
 - Public Funds and within public funds, in the following sub-cuts
 - By fund strategy (30+)

Custodian League Table - Global Funds

Convergence - Oct 2022 League Tables - Custodian Market Segment - Fund Relationships										
All Custodians	Oct -22 #FR	Oct -21 #FR	21-22 Change	21-22 Change %	Market Share-22	Market Share-21	22-21 Change %	Oct -22 Rank	Oct -21 Rank	22-21 Change
JPMORGAN	17,236	16,171	1,065	6.6%	7.8%	7.9%	-1.8%	1	1	0
BANK OF NEW YORK	15,671	15,132	539	3.6%	7.1%	7.4%	-4.6%	2	2	0
SILICON VALLEY BANK	14,882	11,171	3,711	33.2%	6.7%	5.5%	22.8%	3	4	1
STATE STREET IFS	14,449	14,155	294	2.1%	6.5%	7.0%	-5.9%	4	3	-1
BANK OF AMERICA	10,829	10,003	826	8.3%	4.9%	4.9%	-0.2%	5	5	0
FIRST REPUBLIC BANK	10,697	8,524	2,173	25.5%	4.8%	4.2%	15.7%	6	6	0
CITIBANK	8,262	7,996	266	3.3%	3.7%	3.9%	-4.8%	7	7	0
NORTHERN TRUST	6,391	6,001	390	6.5%	2.9%	2.9%	-1.9%	8	8	0
MORGAN STANLEY	5,980	5,386	594	11.0%	2.7%	2.6%	2.3%	9	9	0
BNP PARIBAS	5,694	5,152	542	10.5%	2.6%	2.5%	1.9%	10	11	1
GOLDMAN SACHS BANK USA	5,671	5,344	327	6.1%	2.6%	2.6%	-2.2%	11	10	-1
US BANCORP	5,188	4,727	461	9.8%	2.3%	2.3%	1.1%	12	12	0
WELLS FARGO	4,482	4,606	-124	-2.7%	2.0%	2.3%	-10.3%	13	13	0
HSBC FINANCIAL SERVICES	3,661	3,474	187	5.4%	1.7%	1.7%	-2.9%	14	16	2
CACEIS	3,639	3,555	84	2.4%	1.6%	1.7%	-5.7%	15	14	-1
CREDIT SUISSE	3,192	3,550	-358	-10.1%	1.4%	1.7%	-17.1%	16	15	-1
UNION BANK OF SWITZERLAND	3,085	3,077	8	0.3%	1.4%	1.5%	-7.6%	17	17	0
BROWN BROTHER HARRIMAN	2,483	2,398	85	3.5%	1.1%	1.2%	-4.6%	18	18	0
SOCIETE GENERALE	2,289	2,291	-2	-0.1%	1.0%	1.1%	-7.9%	19	20	1
ROYAL BANK OF CANADA	2,234	2,254	-20	-0.9%	1.0%	1.1%	-8.7%	20	21	1
DEUTSCHE BANK	2,077	2,309	-232	-10.0%	0.9%	1.1%	-17.1%	21	19	-2
FIDELITY	1,862	1,725	137	7.9%	0.8%	0.8%	-0.5%	22	22	0
CITCO FUNDS SERVICES	1,638	1,569	69	4.4%	0.7%	0.8%	-3.8%	23	23	0
INTERACTIVE BROKERS	1,574	1,439	135	9.4%	0.7%	0.7%	0.8%	24	24	0
BARCLAYS	1,435	1,343	92	6.9%	0.6%	0.7%	-1.5%	25	25	0
TOP 25 CUSTODIANS FR - ALL	154,601	143,352	11,249	7.8%	70.0%	70.5%	-0.6%			
ALL OTHER	66,174	60,113	6,061	10.1%	30.0%	29.5%	1.5%			
TOTAL CUSTODIAN FR DISCLOSED	220,775	203,465	17,310	8.5%	73.5%	75.4%	-2.6%			
NOT REPORTED	35,480	29,624	5,856	19.8%	11.8%	11.0%	7.5%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	44,191	36,648	7,543	20.6%	14.7%	13.6%	8.3%			
TOTAL FUNDS NOT DISCLOSING A CUSTODIAN FR	79,671	66,272	13,399	20.2%	26.5%	24.6%	7.9%			
TOTAL FUNDS	300,446	269,737	30,709	11.4%	100.0%	100.0%	0.0%			

Fund Custodian Peer Analysis – Global Funds - Growth and Market Share

Best and Worst Performing Peer Groups

- Custodians ranked 1-10 registered the highest growth in funds
 - Funds increased by 10.43%, or 1.23x the market
 - Market share increased from 49.00% to 49.87%
 - An increase of 1.77 %
- Custodians ranked 11-25 registered the lowest growth in funds
 - Funds increased 1.94%, or 0.23x the market
 - Market share declined from 21.46% to 20.16%
 - A decrease of 6.05%

Peer Group Performance by Fund Relationships						
Custodian Peer Group Analysis	Y-Y Growth	Growth vs-MKT	SOM 2022	SOM 2021	SOM Change	SOM Change %
Market Growth Funds	11.38%		100%	100%		
Market Growth Custodian Disclosed	8.51%	0.75	73.48%	75.43%	-1.95%	-2.58%
Custodians Ranked 1-10	10.43%	1.23	49.87%	49.00%	0.87%	1.77%
Custodias Ranked 11-25	1.94%	0.23	20.16%	21.46%	-1.30%	-6.05%
All Other Custodians	10.08%	1.19	29.97%	29.54%	0.43%	1.45%
Market Growth Custodian Not Disclosed	20.22%	1.78	26.52%	24.57%	1.95%	7.93%

Fund Custodians League Table – Global AUA

Convergence - Oct 2022 League Tables - Custodian Market Segment - Assets (in BN)										
All Custodians	Oct -22 FR-AUA	Oct -21 FR-AUA	21-22 Change	21-22 Change %	Market Share-22	Market Share-21	22-21 Change %	Oct -22 Rank	Oct -21 Rank	22-21 Change
JPMORGAN	\$16,750.45	\$18,774.98	-\$2,024.52	-10.8%	12.2%	14.1%	-13.2%	1	1	0
STATE STREET IFS	\$16,044.45	\$17,798.39	-\$1,753.94	-9.9%	11.7%	13.4%	-12.3%	2	2	0
BANK OF NEW YORK	\$13,425.09	\$14,256.31	-\$831.21	-5.8%	9.8%	10.7%	-8.3%	3	3	0
BANK OF AMERICA	\$7,440.27	\$6,947.14	\$493.13	7.1%	5.4%	5.2%	4.2%	4	4	0
CITIBANK	\$5,898.56	\$5,291.38	\$607.18	11.5%	4.3%	4.0%	8.5%	5	5	0
MORGAN STANLEY	\$4,973.22	\$4,184.02	\$789.20	18.9%	3.6%	3.1%	15.7%	6	7	1
GOLDMAN SACHS BANK USA	\$4,542.18	\$4,177.28	\$364.90	8.7%	3.3%	3.1%	5.8%	7	8	1
NORTHERN TRUST	\$4,510.86	\$4,709.71	-\$198.85	-4.2%	3.3%	3.5%	-6.8%	8	6	-2
BNP PARIBAS	\$3,999.98	\$3,453.42	\$546.55	15.8%	2.9%	2.6%	12.7%	9	11	2
BARCLAYS	\$3,725.04	\$3,799.85	-\$74.81	-2.0%	2.7%	2.9%	-4.6%	10	9	-1
UNION BANK OF SWITZERLAND	\$3,641.07	\$3,390.76	\$250.31	7.4%	2.7%	2.5%	4.5%	11	12	1
CREDIT SUISSE	\$3,484.77	\$3,548.59	-\$63.82	-1.8%	2.5%	2.7%	-4.4%	12	10	-2
WELLS FARGO	\$2,766.64	\$2,581.83	\$184.81	7.2%	2.0%	1.9%	4.3%	13	14	1
HSBC FINANCIAL SERVICES	\$2,580.37	\$2,488.20	\$92.17	3.7%	1.9%	1.9%	0.9%	14	15	1
SILICON VALLEY BANK	\$2,372.69	\$1,744.31	\$628.38	36.0%	1.7%	1.3%	32.4%	15	18	3
DEUTSCHE BANK	\$2,261.95	\$2,428.57	-\$166.63	-6.9%	1.7%	1.8%	-9.3%	16	16	0
US BANCORP	\$2,211.73	\$2,142.16	\$69.57	3.2%	1.6%	1.6%	0.5%	17	17	0
BROWN BROTHER HARRIMAN	\$2,019.12	\$2,685.15	-\$666.03	-24.8%	1.5%	2.0%	-26.8%	18	13	-5
SOCIETE GENERALE	\$1,854.62	\$1,667.66	\$186.96	11.2%	1.4%	1.3%	8.2%	19	19	0
FIRST REPUBLIC BANK	\$1,815.32	\$1,251.86	\$563.46	45.0%	1.3%	0.9%	41.1%	20	21	1
STANDARD CHARTERED BANK	\$1,455.92	\$1,348.11	\$107.81	8.0%	1.1%	1.0%	5.1%	21	20	-1
FIDELITY	\$1,159.27	\$1,005.75	\$153.52	15.3%	0.8%	0.8%	12.2%	22	23	1
CACEIS	\$1,035.28	\$1,134.28	-\$99.00	-8.7%	0.8%	0.9%	-11.2%	23	22	-1
ROYAL BANK OF CANADA	\$1,020.05	\$954.49	\$65.56	6.9%	0.7%	0.7%	4.0%	24	24	0
BANK OF NOVA SCOTIA	\$895.75	\$816.28	\$79.46	9.7%	0.7%	0.6%	6.8%	25	25	0
TOP 25 CUSTODIANS FR - ALL	\$111,884.68	\$112,580.50	-\$695.82	-0.6%	81.7%	84.5%	-3.3%			
ALL OTHER	\$25,027.15	\$20,679.45	\$4,347.70	21.0%	18.3%	15.5%	17.8%			
TOTAL CUSTODIAN FR AUA DISCLOSED	\$136,911.83	\$133,259.95	\$3,651.88	2.7%	94.6%	94.9%	-0.3%			
NOT REPORTED	\$4,925.99	\$4,483.73	\$442.25	9.9%	3.4%	3.2%	6.6%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	\$2,902.52	\$2,674.47	\$228.05	8.5%	2.0%	1.9%	5.3%			
TOTAL ASSETS NOT DISCLOSING A CUSTODIAN FR	\$7,828.51	\$7,158.20	\$670.30	9.4%	5.4%	5.1%	6.1%			
TOTAL FUND ASSETS	\$144,740.34	\$140,418.15	\$4,322.19	3.1%	100.0%	100.0%	0.0%			

Fund Custodian Peer Analysis – Global AUA - Growth & Market Share

Best and Worst Performing Peer Groups

- Custodians ranked >25 registered the highest AUA growth
 - AUA increased 21.02%, or 7.67x the market
 - Market share increased from 15.52% to 18.28%
 - An increase of 17.80%
- Custodian ranked 1-10 registered the lowest AUA growth
 - AUA decreased 2.50%, or -0.91x the market
 - Market share declined from 62.58% to 59.39%
 - A decrease of 5.10%

Peer Group Performance by Fund Assets						
Custodian Peer Group Analysis	Y-Y Growth	Growth vs-MKT	SOM 2022	SOM 2021	SOM Change	SOM Change %
Market Growth Assets	3.08%		100%	100%		
Market Growth Custodian Disclosed	2.74%	0.89	94.59%	94.90%	-0.31%	-0.33%
Custodians Ranked 1-10	-2.50%	-0.91	59.39%	62.58%	-3.19%	-5.10%
Custodias Ranked 11-25	4.75%	1.73	22.33%	21.90%	0.43%	1.96%
All Other Custodians	21.02%	7.67	18.28%	15.52%	2.76%	17.80%
Market Growth Custodian Not Disclosed	9.36%	3.04	5.41%	5.10%	0.31%	6.10%

Single Fund Custodians League Table – Global Funds

Convergence - 2022 League Tables - Single Custodian Market Segment - Fund Relationships										
Single Custodians	Oct -22 #FR	Oct -21 #FR	21-22 Change	21-22 Change %	Market Share-22	Market Share-21	22-21 Change %	Oct -22 Rank	Oct -21 Rank	22-21 Change
STATE STREET IFS	12,390	12,112	278	2.3%	10.0%	10.3%	-3.3%	1	1	0
BANK OF NEW YORK	10,247	9,936	311	3.1%	8.3%	8.5%	-2.6%	2	2	0
SILICON VALLEY BANK	10,008	7,127	2,881	40.4%	8.1%	6.1%	32.7%	3	4	1
JPMORGAN	9,716	9,233	483	5.2%	7.8%	7.9%	-0.6%	4	3	-1
FIRST REPUBLIC BANK	5,626	5,210	416	8.0%	4.5%	4.4%	2.0%	5	5	0
CITIBANK	4,691	4,655	36	0.8%	3.8%	4.0%	-4.8%	6	6	0
BNP PARIBAS	4,301	3,956	345	8.7%	3.5%	3.4%	2.7%	7	7	0
NORTHERN TRUST	3,672	3,579	93	2.6%	3.0%	3.1%	-3.1%	8	8	0
CACEIS	3,612	3,531	81	2.3%	2.9%	3.0%	-3.3%	9	9	0
US BANCORP	3,305	3,003	302	10.1%	2.7%	2.6%	4.0%	10	10	0
BANK OF AMERICA	2,892	2,771	121	4.4%	2.3%	2.4%	-1.4%	11	11	0
HSBC FINANCIAL SERVICES	2,528	2,430	98	4.0%	2.0%	2.1%	-1.7%	12	12	0
BROWN BROTHER HARRIMAN	2,257	2,216	41	1.9%	1.8%	1.9%	-3.8%	13	13	0
ROYAL BANK OF CANADA	1,868	1,954	-86	-4.4%	1.5%	1.7%	-9.7%	14	14	0
CREDIT SUISSE	1,685	1,712	-27	-1.6%	1.4%	1.5%	-7.0%	15	15	0
SOCIETE GENERALE	1,538	1,626	-88	-5.4%	1.2%	1.4%	-10.6%	16	16	0
WELLS FARGO	1,481	1,613	-132	-8.2%	1.2%	1.4%	-13.2%	17	17	0
UNION BANK OF SWITZERLAND	1,068	1,065	3	0.3%	0.9%	0.9%	-5.2%	18	18	0
DZ BANK	1,033	1,039	-6	-0.6%	0.8%	0.9%	-6.1%	19	19	0
SKANDINAVISKA SECURITIES	866	826	40	4.8%	0.7%	0.7%	-0.9%	20	20	0
CITCO FUNDS SERVICES	862	711	151	21.2%	0.7%	0.6%	14.6%	21	25	4
INTERACTIVE BROKERS	840	720	120	16.7%	0.7%	0.6%	10.2%	22	24	2
ROYAL BANK OF SCOTLAND	774	814	-40	-4.9%	0.6%	0.7%	-10.2%	23	21	-2
EFG INVESTMENT SERVICES	729	28	701	2503.6%	0.6%	0.0%	2360.0%	24	155	131
FIDELITY	687	628	59	9.4%	0.6%	0.5%	3.4%	25	30	5
TOP 25 SINGLE CUSTODIAN FR	88,676	82,495	6,181	7.5%	71.5%	70.4%	1.6%			
ALL OTHER	35,284	34,631	653	1.9%	28.5%	29.6%	-3.7%			
TOTAL SINGLE CUSTODIAN FR DISCLOSED	123,960	117,126	6,834	5.8%	41.3%	43.4%	-5.0%			
NOT REPORTED	35,480	29,624	5,856	19.8%	11.8%	11.0%	7.5%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	44,191	36,648	7,543	20.6%	14.7%	13.6%	8.3%			
TOTAL FUNDS NOT DISCLOSING A CUSTODIAN FR	79,671	66,272	13,399	20.2%	26.5%	24.6%	7.9%			
TOTAL FUNDS WITH MULTI-CUSTODIAN FR	96,815	86,339	10,476	12.1%	32.2%	32.0%	0.7%			
TOTAL FUNDS	300,446	269,737	30,709	11.4%	100.0%	100.0%	0.0%			

Best and Worst Performing Peer Groups

- Custodians ranked 1-10 registered the highest growth in funds
 - Funds increased 8.38%, or 1.44x the market
 - Market share increased from 53.23% to 54.51%
 - An increase of 2.41%
- Custodians ranked >25 registered the lowest growth in funds
 - Funds increased 1.89%, or 0.32x the market
 - Market share declined from 29.57% to 28.46%
 - A decrease of 3.73%

Peer Group Performance by Fund Relationships						
Custodian Peer Group Analysis	Y-Y Growth	Growth vs-MKT	SOM 2022	SOM 2021	SOM Change	SOM Change %
Market Growth Funds	11.38%		100%	100%		
Market Growth Single Custodian Disclosed	5.83%	0.51	41.26%	43.42%	-2.16%	-4.98%
Custodians Ranked 1-10	8.38%	1.44	54.51%	53.23%	1.28%	2.41%
Custodians Ranked 11-25	4.74%	0.81	17.03%	17.21%	-0.18%	-1.04%
All Other Custodians	1.89%	0.32	28.46%	29.57%	-1.10%	-3.73%
Market Growth Multi Custodian Disclosed	12.13%	1.07	32.22%	32.01%	0.22%	0.67%
Market Growth Custodian Not Disclosed	20.22%	1.78	26.52%	24.57%	1.95%	7.93%

Single Fund Custodians League Table – Global AUA

Convergence - Oct 2022 League Tables - Single Custodian Market Segment - Assets (in BN)

Single Custodians	Oct -22 FR-AUA	Oct -21 FR-AUA	21-22 Change	21-22 Change %	Market Share-22	Market Share-21	22-21 Change %	Oct -22 Rank	Oct -21 Rank	22-21 Change
STATE STREET IFS	\$12,858.05	\$14,891.20	-\$2,033.15	-13.7%	25.1%	25.9%	-3.2%	1	1	0
JPMORGAN	\$10,261.42	\$12,573.10	-\$2,311.68	-18.4%	20.0%	21.9%	-8.5%	2	2	0
BANK OF NEW YORK	\$7,824.65	\$8,408.10	-\$583.45	-6.9%	15.3%	14.6%	4.4%	3	3	0
NORTHERN TRUST	\$1,919.19	\$2,219.65	-\$300.46	-13.5%	3.7%	3.9%	-3.0%	4	5	1
BROWN BROTHER HARRIMAN	\$1,869.42	\$2,533.56	-\$664.14	-26.2%	3.6%	4.4%	-17.3%	5	4	-1
CITIBANK	\$1,377.83	\$1,395.25	-\$17.42	-1.2%	2.7%	2.4%	10.7%	6	7	1
BNP PARIBAS	\$1,367.25	\$1,534.86	-\$167.60	-10.9%	2.7%	2.7%	-0.1%	7	6	-1
US BANCORP	\$1,328.94	\$1,379.21	-\$50.26	-3.6%	2.6%	2.4%	8.0%	8	8	0
CACEIS	\$993.56	\$1,128.39	-\$134.83	-11.9%	1.9%	2.0%	-1.3%	9	9	0
HSBC FINANCIAL SERVICES	\$877.58	\$961.20	-\$83.62	-8.7%	1.7%	1.7%	2.4%	10	10	0
BANK OF AMERICA	\$876.97	\$763.63	\$113.34	14.8%	1.7%	1.3%	28.8%	11	11	0
SILICON VALLEY BANK	\$771.03	\$519.15	\$251.88	48.5%	1.5%	0.9%	66.5%	12	14	2
CREDIT SUISSE	\$575.14	\$619.30	-\$44.16	-7.1%	1.1%	1.1%	4.1%	13	12	-1
DZ BANK	\$497.99	\$559.30	-\$61.31	-11.0%	1.0%	1.0%	-0.2%	14	13	-1
FIRST REPUBLIC BANK	\$476.30	\$320.77	\$155.54	48.5%	0.9%	0.6%	66.5%	15	19	4
UNION BANK OF SWITZERLAND	\$441.63	\$516.62	-\$74.99	-14.5%	0.9%	0.9%	-4.1%	16	15	-1
ROYAL BANK OF CANADA	\$357.10	\$428.55	-\$71.45	-16.7%	0.7%	0.7%	-6.6%	17	17	0
SOCIETE GENERALE	\$354.94	\$492.02	-\$137.08	-27.9%	0.7%	0.9%	-19.1%	18	16	-2
WELLS FARGO	\$330.07	\$313.16	\$16.92	5.4%	0.6%	0.5%	18.2%	19	20	1
SKANDINAVISKA SECURITIES	\$262.68	\$341.41	-\$78.73	-23.1%	0.5%	0.6%	-13.7%	20	18	-2
CITCO FUNDS SERVICES	\$248.68	\$184.46	\$64.21	34.8%	0.5%	0.3%	51.2%	21	24	3
PICTET CIE EUROPE	\$225.17	\$264.78	-\$39.61	-15.0%	0.4%	0.5%	-4.6%	22	21	-1
DEKABANK	\$207.95	\$238.21	-\$30.26	-12.7%	0.4%	0.4%	-2.1%	23	22	-1
CANADIAN IMPERIAL BANK OF COMMERCE	\$160.86	\$116.24	\$44.62	38.4%	0.3%	0.2%	55.2%	24	30	6
SWEDBANK	\$153.80	\$194.50	-\$40.70	-20.9%	0.3%	0.3%	-11.3%	25	23	-2
TOP 25 SINGLE CUSTODIAN FR ASSETS	\$46,618.22	\$52,896.63	-\$6,278.41	-11.9%	91.0%	92.1%	-1.2%			
ALL OTHER	\$4,621.15	\$4,559.69	\$61.47	1.3%	9.0%	7.9%	13.6%			
TOTAL SINGLE CUSTODIAN FR ASSETS DISCLOSED	\$51,239.37	\$57,456.32	-\$6,216.94	-10.8%	35.4%	40.9%	-13.5%			
NOT REPORTED	\$4,925.99	\$4,483.73	\$442.25	9.9%	3.4%	3.2%	6.6%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	\$2,902.52	\$2,674.47	\$228.05	8.5%	2.0%	1.9%	5.3%			
TOTAL ASSETS NOT DISCLOSING A CUSTODIAN FR	\$7,828.51	\$7,158.20	\$670.30	9.4%	5.4%	5.1%	6.1%			
TOTAL ASSETS WITH MULTI-CUSTODIAN FR	\$85,672.46	\$75,803.63	\$9,868.83	13.0%	59.2%	54.0%	9.6%			
TOTAL FUND ASSETS	\$144,740.34	\$140,418.15	\$4,322.19	3.1%	100.0%	100.0%	0.0%			

Single Custodian Peer Analysis – Global AUA - Growth & Market Share

Best and Worst Performing Peer Groups

- Custodians ranked >25 registered the highest AUA growth
 - AUA increased 1.35%, or -0.12x the market
 - Market share increased from 7.94% to 9.02%
 - An increase of 13.64%
- Custodians ranked 1-10 registered the lowest AUA growth
 - AUA declined 13.50%, or 1.25x the market
 - Market share declined from 81.84% to 79.39%
 - A decrease of 3.00%

Peer Group Performance by Fund Assets						
Custodian Peer Group Analysis	Y-Y Growth	Growth vs-MKT	SOM 2022	SOM 2021	SOM Change	SOM Change %
Market Growth Assets	3.08%		100%	100%		
Market Growth Single Custodian Disclosed	-10.82%	-3.52	35.40%	40.92%	-5.52%	-13.48%
Custodians Ranked 1-10	-13.50%	1.25	79.39%	81.84%	-2.46%	-3.00%
Custodias Ranked 11-25	1.16%	-0.11	11.59%	10.22%	1.37%	13.44%
All Other Custodians	1.35%	-0.12	9.02%	7.94%	1.08%	13.64%
Market Growth Multi Custodian Disclosed	13.02%	4.23	59.19%	53.98%	5.21%	9.64%
Market Growth Custodian Not Disclosed	9.36%	3.04	5.41%	5.10%	0.31%	6.10%

Multi-Fund Custodian League Table – Global Funds

Convergence - 2022 League Tables - Multi Custodian Market Segment - Fund Relationships										
Multi Custodians	Oct -22 #FR	Oct -21 #FR	21-22 Change	21-22 Change %	Market Share-22	Market Share-21	22-21 Change %	Oct -22 Rank	Oct -21 Rank	22-21 Change
BANK OF AMERICA	7,937	7,232	705	9.7%	8.2%	8.4%	-2.1%	1	1	0
JPMORGAN	7,520	6,938	582	8.4%	7.8%	8.0%	-3.3%	2	2	0
BANK OF NEW YORK	5,424	5,196	228	4.4%	5.6%	6.0%	-6.9%	3	3	0
MORGAN STANLEY	5,366	4,831	535	11.1%	5.5%	5.6%	-0.9%	4	4	0
FIRST REPUBLIC BANK	5,071	3,314	1,757	53.0%	5.2%	3.8%	36.5%	5	8	3
GOLDMAN SACHS BANK USA	5,007	4,686	321	6.9%	5.2%	5.4%	-4.7%	6	5	-1
SILICON VALLEY BANK	4,875	4,044	831	20.5%	5.0%	4.7%	7.5%	7	6	-1
CITIBANK	3,571	3,341	230	6.9%	3.7%	3.9%	-4.7%	8	7	-1
WELLS FARGO	3,001	2,993	8	0.3%	3.1%	3.5%	-10.6%	9	9	0
NORTHERN TRUST	2,719	2,422	297	12.3%	2.8%	2.8%	0.1%	10	10	0
STATE STREET IFS	2,059	2,043	16	0.8%	2.1%	2.4%	-10.1%	11	11	0
UNION BANK OF SWITZERLAND	2,017	2,012	5	0.2%	2.1%	2.3%	-10.6%	12	12	0
US BANCORP	1,883	1,724	159	9.2%	1.9%	2.0%	-2.6%	13	14	1
CREDIT SUISSE	1,507	1,838	-331	-18.0%	1.6%	2.1%	-26.9%	14	13	-1
DEUTSCHE BANK	1,416	1,636	-220	-13.4%	1.5%	1.9%	-22.8%	15	15	0
BNP PARIBAS	1,393	1,196	197	16.5%	1.4%	1.4%	3.9%	16	17	1
BARCLAYS	1,300	1,224	76	6.2%	1.3%	1.4%	-5.3%	17	16	-1
ESHARES	1,176	932	244	26.2%	1.2%	1.1%	12.5%	18	20	2
FIDELITY	1,175	1,097	78	7.1%	1.2%	1.3%	-4.5%	19	18	-1
HSBC FINANCIAL SERVICES	1,133	1,044	89	8.5%	1.2%	1.2%	-3.2%	20	19	-1
RAYMOND JAMES ASSOCIATES	934	687	247	36.0%	1.0%	0.8%	21.2%	21	23	2
CANADIAN IMPERIAL BANK OF COMMERCE	809	490	319	65.1%	0.8%	0.6%	47.2%	22	27	5
CITCO FUNDS SERVICES	776	858	-82	-9.6%	0.8%	1.0%	-19.3%	23	21	-2
SOCIETE GENERALE	751	665	86	12.9%	0.8%	0.8%	0.7%	24	24	0
INTERACTIVE BROKERS	734	719	15	2.1%	0.8%	0.8%	-9.0%	25	22	-3
TOP 25 MULTI CUSTODIAN FR	69,554	63,162	6,392	10.1%	71.8%	73.2%	-1.8%			
ALL OTHER	27,261	23,177	4,084	17.6%	28.2%	26.8%	4.9%			
TOTAL MULTI CUSTODIAN FR	96,815	86,339	10,476	12.1%	32.2%	32.0%	0.7%			
NOT REPORTED	35,480	29,624	5,856	19.8%	11.8%	11.0%	7.5%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	44,191	36,648	7,543	20.6%	14.7%	13.6%	8.3%			
TOTAL FUNDS NOT DISCLOSING A CUSTODIAN FR	79,671	66,272	13,399	20.2%	26.5%	24.6%	7.9%			
TOTAL FUNDS WITH SINGLE CUSTODIAN FR	123,960	117,126	6,834	5.8%	41.3%	43.4%	-5.0%			
TOTAL FUNDS	300,446	269,737	30,709	11.4%	100.0%	100.0%	0.0%			

Best and Worst Performing Peer Groups

- Custodians ranked >25 registered the highest growth in funds
 - Funds increased 17.62%, or 1.45x the market
 - Market share increased from 26.84% to 28.16%
 - An increase of 4.89%
- Custodian ranked 11-25 registered the smallest growth in funds
 - Funds increased 4.94%, or 0.41x the market
 - Market share declined from 21.04% to 19.69%
 - A decrease of 6.41%

Peer Group Performance by Fund Relationships						
Custodian Peer Group Analysis	Y-Y Growth	Growth vs-MKT	SOM 2022	SOM 2021	SOM Change	SOM Change %
Market Growth Funds	11.38%		100%	100%		
Market Growth Multi Custodian Disclosed	12.13%	1.07	32.22%	32.01%	0.22%	0.67%
Custodians Ranked 1-10	12.21%	1.01	52.15%	52.12%	0.04%	0.07%
Custodias Ranked 11-25	4.94%	0.41	19.69%	21.04%	-1.35%	-6.41%
All Other Custodians	17.62%	1.45	28.16%	26.84%	1.31%	4.89%
Market Growth Single Custodian Disclosed	5.83%	0.51	41.26%	43.42%	-2.16%	-4.98%
Market Growth Custodian Not Disclosed	20.22%	1.78	26.52%	24.57%	1.95%	7.93%

Multi-Fund Custodians League Table – Global AUA

Convergence - Oct 2022 League Tables - Multi Custodian Market Segment - Assets (in BN)										
Multi Custodians	Oct -22 FR-AUA	Oct -21 FR-AUA	21-22 Change	21-22 Change %	Market Share-22	Market Share-21	22-21 Change %	Oct -22 Rank	Oct -21 Rank	22-21 Change
BANK OF AMERICA	\$6,563.30	\$6,183.51	\$379.79	6.1%	7.7%	8.2%	-6.1%	1	1	0
JPMORGAN	\$6,489.04	\$6,201.88	\$287.16	4.6%	7.6%	8.2%	-7.4%	2	2	0
BANK OF NEW YORK	\$5,600.44	\$5,848.21	-\$247.77	-4.2%	6.5%	7.7%	-15.3%	3	3	0
MORGAN STANLEY	\$4,890.05	\$4,118.80	\$771.25	18.7%	5.7%	5.4%	5.0%	4	4	0
CITIBANK	\$4,520.73	\$3,896.13	\$624.60	16.0%	5.3%	5.1%	2.7%	5	8	3
GOLDMAN SACHS BANK USA	\$4,469.67	\$4,119.34	\$350.33	8.5%	5.2%	5.4%	-4.0%	6	5	-1
BARCLAYS	\$3,700.83	\$3,777.83	-\$77.00	-2.0%	4.3%	5.0%	-13.3%	7	6	-1
UNION BANK OF SWITZERLAND	\$3,199.44	\$2,874.13	\$325.30	11.3%	3.7%	3.8%	-1.5%	8	7	-1
STATE STREET IFS	\$3,186.40	\$2,907.19	\$279.21	9.6%	3.7%	3.8%	-3.0%	9	9	0
CREDIT SUISSE	\$2,909.63	\$2,929.29	-\$19.66	-0.7%	3.4%	3.9%	-12.1%	10	10	0
BNP PARIBAS	\$2,632.72	\$1,918.57	\$714.16	37.2%	3.1%	2.5%	21.4%	11	11	0
NORTHERN TRUST	\$2,591.67	\$2,490.06	\$101.61	4.1%	3.0%	3.3%	-7.9%	12	12	0
WELLS FARGO	\$2,436.57	\$2,268.67	\$167.90	7.4%	2.8%	3.0%	-5.0%	13	14	1
DEUTSCHE BANK	\$2,128.20	\$2,299.59	-\$171.39	-7.5%	2.5%	3.0%	-18.1%	14	13	-1
HSBC FINANCIAL SERVICES	\$1,702.79	\$1,527.00	\$175.79	11.5%	2.0%	2.0%	-1.3%	15	15	0
SILICON VALLEY BANK	\$1,601.66	\$1,225.15	\$376.51	30.7%	1.9%	1.6%	15.7%	16	17	1
SOCIETE GENERALE	\$1,499.68	\$1,175.65	\$324.04	27.6%	1.8%	1.6%	12.9%	17	16	-1
STANDARD CHARTERED BANK	\$1,441.44	\$1,333.52	\$107.93	8.1%	1.7%	1.8%	-4.4%	18	20	2
FIRST REPUBLIC BANK	\$1,339.02	\$931.09	\$407.92	43.8%	1.6%	1.2%	27.2%	19	18	-1
FIDELITY	\$1,116.06	\$976.47	\$139.59	14.3%	1.3%	1.3%	1.1%	20	19	-1
BANK OF NOVA SCOTIA	\$887.70	\$811.07	\$76.63	9.4%	1.0%	1.1%	-3.2%	21	23	2
US BANCORP	\$882.78	\$762.95	\$119.83	15.7%	1.0%	1.0%	2.4%	22	27	5
COMPUTERSHARE	\$747.63	\$592.69	\$154.94	26.1%	0.9%	0.8%	11.6%	23	21	-2
NOMURA BANK LUXEMBOURG SA	\$725.75	\$693.14	\$32.62	4.7%	0.8%	0.9%	-7.4%	24	24	0
ROYAL BANK OF CANADA	\$662.95	\$525.94	\$137.01	26.1%	0.8%	0.7%	11.5%	25	22	-3
TOP 25 MULTI CUSTODIAN FR ASSETS	\$67,926.16	\$62,387.87	\$5,538.29	8.9%	79.3%	82.3%	-3.7%			
ALL OTHER	\$17,746.30	\$13,415.76	\$4,330.54	32.3%	20.7%	17.7%	17.0%			
TOTAL MULTI CUSTODIAN FR ASSETS	\$85,672.46	\$75,803.63	\$9,868.83	13.0%	59.2%	54.0%	9.6%			
NOT REPORTED	\$4,925.99	\$4,483.73	\$442.25	9.9%	3.4%	3.2%	6.6%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	\$2,902.52	\$2,674.47	\$228.05	8.5%	2.0%	1.9%	5.3%			
TOTAL ASSETS NOT DISCLOSING A CUSTODIAN FR	\$7,828.51	\$7,158.20	\$670.30	9.4%	5.4%	5.1%	6.1%			
TOTAL ASSETS WITH SINGLE CUSTODIAN FR	\$51,239.37	\$57,456.32	-\$6,216.94	-10.8%	35.4%	40.9%	-13.5%			
TOTAL FUND ASSETS	\$144,740.34	\$140,418.15	\$4,322.19	3.1%	100.0%	100.0%	0.0%			

Custodians Peer Groups – Global Multi AUA Growth & Market Share

Best and Worst Performing Peer Groups

- Custodian ranked >25 registered the highest AUA growth
 - AUA increased 32.28%, or 2.48x the market
 - Market share increased from 17.70% to 20.71%
 - An increase of 17.04%
- Custodian ranked 1-10 registered the lowest AUA growth
 - AUA increased 6.24%, or 0.48x the market
 - Market share declined from 56.54% to 53.14%
 - A decrease of 6.00%

Peer Group Performance by Fund Assets						
Custodian Peer Group Analysis	Y-Y Growth	Growth vs-MKT	SOM 2022	SOM 2021	SOM Change	SOM Change %
Market Growth Assets	3.08%		100%	100%		
Market Growth Multi Custodian Disclosed	13.02%	4.23	59.19%	53.98%	5.21%	9.64%
Custodians Ranked 1-10	6.24%	0.48	53.14%	56.54%	-3.39%	-6.00%
Custodias Ranked 11-25	14.67%	1.13	26.14%	25.77%	0.38%	1.46%
All Other Custodians	32.28%	2.48	20.71%	17.70%	3.02%	17.04%
Market Growth Single Custodian Disclosed	-10.82%	-3.52	35.40%	40.92%	-5.52%	-13.48%
Market Growth Custodian Not Disclosed	9.36%	3.04	5.41%	5.10%	0.31%	6.10%

About Convergence

- Founded in 2013, Convergence provides independent insights into important trends and challenges facing our clients in the fast-growing and dynamic asset management industry by using alternative data and data science analytics.
- Our insights help clients grow revenue, improve efficiency and identify and manage risks.
- Our clients include Asset Managers, Institutional Investors and Service Providers.
- Our founders, are former C-Suite executives in hedge funds, private equity funds, broker-dealers and securities exchanges.
- We are headquartered in South Norwalk, CT and operate in New Jersey and Hyderabad, India.
- For additional information please contact John Phinney @ 203-956-4824 or George Gainer @ 203-956-4824 or to learn more about how Convergence can help you.

Terms Used in Our Fund Custodian League Tables

- **Global Funds and Assets**
 - Measures public and private funds and assets domiciled in US and non-US locations that Convergence can attribute to one or more Fund Custodian.
- **US Funds and Assets**
 - Measures public and private funds and assets domiciled in the US that Convergence can attribute to one or more Fund Custodian.
- **Non-US Funds and Assets**
 - Measures public and private funds and assets domiciled outside the United States that Convergence can attribute to one or more Fund Custodian.
- **Not Reported – Global – US – Non-US Funds and Assets**
 - Measures public and private funds and assets domiciled in US and non-US locations that are being serviced by the investment adviser or a controlled affiliate.
- **Not Applicable – Global – US – Non-US Funds and Assets**
 - Measures public and private funds and assets domiciled in US and non-US locations that are being serviced by the investment adviser or a controlled affiliate.
- **Unattributed Funds and Assets – Global – US – Non-US Funds and Assets**
 - Measures public and private funds and assets domiciled in US and non-US locations that Convergence cannot attribute to one or more Fund Custodian.
- **All Other Custodian**
 - Is a measure of funds and assets attributed to Fund Administrators ranked outside the Top 25.

Terms Used in Our Fund Custodian League Tables

- **Single/Multiple Relationship**
 - A “**Single**” Custodian relationship exists at the fund level when the adviser discloses one Custodian to their fund and a “**Multiple**” Custodian exists when more than one Custodian is named.
- **Total Fund/Asset Custodian Relationships**
 - Total Funds refer to overall number of funds available in the market and Total Assets refer to overall assets available in the market.
- **Total Fund/Asset Custodian Single Relationships**
 - Total Funds in single relationships means, total funds in the market for those who have only single-Custodian relationship and Total Assets in single relationship means total assets in the market for those who have only single-Custodian relationship.
- **Total Fund/Asset Custodian Multiple Relationships**
 - Total Funds in multiple relationships means, total assets in the market for those who have multi-Custodian relationship and Total Assets in multiple relationship means total assets in the market for those who have multi-Custodian relationship.
- **Unique Fund/Asset Custodian Single Relationships**
 - Measures unique Funds in single relationships means, unique funds in the market for those who have only single custodian relationship .
- **Unique Fund/Asset Custodian Multiple Relationships**
 - Measures unique Funds in multiple relationships means, unique funds in the market for those who have multi-Custodian relationship.
- **Total Fund/Asset Market**
 - Total Fund includes all the funds in the market plus all the unique funds. Similarly, Total Asset Marker means all the assets in the market plus all the unique assets.

Additional Analytics available for the Custodian Segment

Convergence offers several additional datasets and analytical tools that can be used to support business development and client and risk management efforts...

- **Competitive Analysis (Business Development)**
 - Compare your growth and market share to a defined peer group in multiple fund type segments
 - Growth is broken down in up to 9 growth factors, each which reveals a story
- **Client New Fund Flow Analytics (Business Development)**
 - Identify new flows into client funds
 - Allows you to determine if you are getting your fair share of the change
- **Clients at Risk (Client Management)**
 - Convergence predictive analytics can identify clients likely to move their business to a competitor in full, or partially through diversification
- **Client Operational Risk Profiles (Risk Management)**
 - Convergence proprietary risk factors can identify high-risk business conditions in your prospective or existing clients
- **ESG Business Profiles**
 - Convergence measures the ESG sensitivity of investment advisers. This differs from ESG investing measurement and complements your work on ESG investing.

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The Convergence Leadership Team



John Phinney, Chairman and CEO

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- ❖ Apollo Global Management-Fund Group: CFO/COO, Rohatyn Group: CFO/COO, JPMorgan [Various Divisions]: CFO, Fidelity Alternative Investments: Director of Operations
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George Evans, Co-President and Chief Revenue Officer

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Eileen Cleary, President, Convergence Talent Management

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Alison Rozbruch, JD, Managing Director, Law Firms-RIAs

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George Gainer, CPA Global Head – Client Management

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- ❖ Gravitas: Finance & Business Performance Analyst, Apollo [through Gravitas]: Business Analysis & Reporting, Iron Mountain: Acquisition Accounting Manager, KPMG: Transaction Services Manager, Deloitte: Audit Senior Staff
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David Etzbach, Managing Director, Custodians and Allocators

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- ❖ Nod Hill Investment Partners, Founder, Steinberg Asset Management, Managing Director, Fidelity Investments / Pyramid Global Advisors, Senior Vice President, Credit Suisse Asset Management, Director, Citigroup Asset Management / Legg Mason, Director / Vice President, JP Morgan - Global Investor Services, Vice President, Bankers Trust
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Carl Versella, Managing Director – Capital Markets

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Vidya Minukuri, Global Head of Data Science & Research

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