Fund Custodians
League Tables

Global Funds and AUC

Reporting Period

Jan 2022 - Jan 2023



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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:
 - o SEC registered private and public funds and advisers
 - State registered private and public funds and advisers
 - o Unregistered private funds and advisers
 - o EU UCITS and private funds
 - Non-pooled investment entities
- This report includes all US and non-US funds and is divided into 3-Section
 - o Funds that use one or more custodians
 - o Funds that use a "single" custodians
 - o Funds that use "multiple" custodians
- Additional Fund custodians League Tables for custodians Funds and AUC are available to Convergence Clients in the following cuts:
 - o Private Funds, and within private funds, in the following sub-cuts
 - Hedge, Private Equity, Real Estate, Venture Capital, Securitized Assets, Hybrid and Liquidity Funds
 - o Public Funds and within public funds, in the following sub-cuts
 - By fund strategy (30+)

Custodians League Table - Global Funds

Convergence - Jan 2023 League Tables - Custodians Market Segment - Fund Relationships												
All		Jan -22		22-23	Market		23-22	Jan -23	Jan -22	23-22		
Custodians	#FR	#FR		Change %						Change		
JPMORGAN	17,283	16,210	1,073	6.6%	7.8%	7.9%	-1.2%	1	1	0		
BANK OF NEW YORK	15,763	15,217	546	3.6%	7.1%	7.4%	-4.0%	2	2	0		
STATE STREET IFS	14,455	14,167	288	2.0%	6.5%	6.9%	-5.4%	3	3	0		
FIRST REPUBLIC BANK	13,622	8,813	4,809	54.6%	6.2%	4.3%	43.3%	4	6	2		
SILICON VALLEY BANK	11,495	11,804	-309	-2.6%	5.2%	5.8%	-9.7%	5	4	-1		
BANK OF AMERICA	10,804	10,072	732	7.3%	4.9%	4.9%	-0.6%	6	5	-1		
CITIBANK	8,311	8,066	245	3.0%	3.8%	3.9%	-4.5%	7	7	0		
NORTHERN TRUST	6,433	6,073	360	5.9%	2.9%	3.0%	-1.8%	8	8	0		
MORGAN STANLEY	5,934	5,420	514	9.5%	2.7%	2.6%	1.5%	9	9	0		
BNP PARIBAS	5,723	5,186	537	10.4%	2.6%	2.5%	2.3%	10	11	1		
GOLDMAN SACHS BANK USA	5,656	5,370	286	5.3%	2.6%	2.6%	-2.4%	11	10	-1		
US BANCORP	5,252	4,808	444	9.2%	2.4%	2.3%	1.2%	12	12	0		
WELLS FARGO	4,470	4,689	-219	-4.7%	2.0%	2.3%	-11.6%	13	13	0		
CACEIS	3,834	3,506	328	9.4%	1.7%	1.7%	1.4%	14	15	1		
HSBC FINANCIAL SERVICES	3,829	3,513	316	9.0%	1.7%	1.7%	1.0%	15	14	-1		
CREDIT SUISSE	3,227	3,495	-268	-7.7%	1.5%	1.7%	-14.4%	16	16	0		
UNION BANK OF SWITZERLAND	3,114	3,066	48	1.6%	1.4%	1.5%	-5.9%	17	17	0		
BROWN BROTHER HARRIMAN	2,499	2,422	77	3.2%	1.1%	1.2%	-4.4%	18	18	0		
SOCIETE GENERALE	2,324	2,293	31	1.4%	1.1%	1.1%	-6.1%	19	19	0		
ROYAL BANK OF CANADA	2,221	2,215	6	0.3%	1.0%	1.1%	-7.1%	20	21	1		
DEUTSCHE BANK	2,087	2,241	-154	-6.9%	0.9%	1.1%	-13.7%	21	20	-1		
FIDELITY	1,840	1,731	109	6.3%	0.8%	0.8%	-1.5%	22	22	0		
CITCO FUNDS SERVICES	1,647	1,593	54	3.4%	0.7%	0.8%	-4.2%	23	23	0		
INTERACTIVE BROKERS	1,544	1,440	104	7.2%	0.7%	0.7%	-0.6%	24	24	0		
BARCLAYS	1,448	1,331	117	8.8%	0.7%	0.6%	0.8%	25	25	0		
TOP 25 CUSTODIANS FR - ALL	154,815	144,741	10,074	7.0%	70.0%	70.6%	-0.9%					
ALL OTHER	66,449	60,347	6,102	10.1%	30.0%	29.4%	2.1%					
TOTAL CUSTODIANS FR DISCLOSED	221,264	205,088	16,176	7.9%	70.7%	74.1%	-4.5%					
NOT REPORTED	33,620	29,777	3,843	12.9%	10.7%	10.8%	-0.1%					
ELIGIBLE FUNDS - NOT ATTRIBUTED	57,927	41,920	16,007	38.2%	18.5%	15.1%	22.3%					
TOTAL FUNDS NOT DISCLOSING A CUSTODIANS FR	91,547	71,697	19,850	27.7%	29.3%	25.9%	13.0%					
TOTAL FUNDS	312,811	276,785	36,026	13.0%	100.0%	100.0%	0.0%					

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

- Custodians ranked >25 registered the highest growth in funds
 - o Funds increased by 10.11%, or 1.28x the market
 - O Market share increased from 29.42% to 30.03%
 - ➤ An increase of 2.06%
- Custodians ranked 11-25 registered the lowest growth in funds
 - o Funds increased 2.93%, or 0.37x the market
 - Market share decreased from 21.31% to 20.33%
 - ➤ A decrease of 4.60%

Peer (Froup Per	formance by F	und Relationships			
Custodians	Y-Y	Growth	SOM	SOM	SOM	SOM
Peer Group Analysis	Growth	vs-MKT	2023	2022	Change	Change %
Market Growth Funds	13.02%		100%	100%		
Market Growth Custodians Disclosed	7.89%	0.61	70.73%	74.10%	-3.36%	-4.54%
Custodians Ranked 1-10	8.71%	1.10	49.63%	49.26%	0.37%	0.76%
Custodians Ranked 11-25	2.93%	0.37	20.33%	21.31%	-0.98%	-4.60%
All Other Custodians	10.11%	1.28	30.03%	29.42%	0.61%	2.06%
Market Growth Custodians Not Disclosed	27.69%	2.13	29.27%	25.90%	3.36%	12.98%

Fund Custodians League Table – Global AUC

Convergence - Jan 2	023 League T	Tables - Custo	odians Mark	ket Segment	- Assets (i	n BN)				
All	Jan -23	Jan -22	22-23	22-23	Market	Market	23-22	Jan -23	Jan -22	23-22
Custodians	FR-AUC	FR-AUC	Change	Change %	Share-23	Share-22	Change %	Rank	Rank	Change
JPMORGAN	\$17,335.84	\$19,157.03	-\$1,821.19	-9.5%	12.5%	14.2%	-12.0%	1	1	0
STATE STREET IFS	\$16,419.68	\$18,397.75	-\$1,978.07	-10.8%	11.8%	13.6%	-13.3%	2	2	0
BANK OF NEW YORK	\$13,837.03	\$14,540.91	-\$703.88	-4.8%	10.0%	10.8%	-7.5%	3	3	0
BANK OF AMERICA	\$7,485.75	\$6,936.11	\$549.63	7.9%	5.4%	5.1%	4.9%	4	4	0
CITIBANK	\$6,096.96	\$5,213.25	\$883.71	17.0%	4.4%	3.9%	13.7%	5	5	0
MORGAN STANLEY	\$4,955.75	\$4,221.28	\$734.47	17.4%	3.6%	3.1%	14.1%	6	7	1
NORTHERN TRUST	\$4,596.99	\$4,843.94	-\$246.95	-5.1%	3.3%	3.6%	-7.8%	7	6	-1
GOLDMAN SACHS BANK USA	\$4,530.35	\$4,160.86	\$369.49	8.9%	3.3%	3.1%	5.8%	8	8	0
BNP PARIBAS	\$4,058.08	\$3,568.30	\$489.78	13.7%	2.9%	2.6%	10.5%	9	10	1
BARCLAYS	\$3,733.48	\$3,788.19	-\$54.71	-1.4%	2.7%	2.8%	-4.2%	10	9	-1
UNION BANK OF SWITZERLAND	\$3,646.77	\$3,392.43	\$254.34	7.5%	2.6%	2.5%	4.5%	11	12	1
CREDIT SUISSE	\$3,509.56	\$3,524.43	-\$14.87	-0.4%	2.5%	2.6%	-3.2%	12	11	-1
WELLS FARGO	\$2,766.04	\$2,586.88	\$179.16	6.9%	2.0%	1.9%	3.9%	13	14	1
HSBC FINANCIAL SERVICES	\$2,596.14	\$2,416.65	\$179.49	7.4%	1.9%	1.8%	4.4%	14	15	1
SILICON VALLEY BANK	\$2,357.61	\$1,766.90	\$590.72	33.4%	1.7%	1.3%	29.7%	15	18	3
DEUTSCHE BANK	\$2,341.22	\$2,364.52	-\$23.30	-1.0%	1.7%	1.8%	-3.8%	16	16	0
US BANCORP	\$2,235.53	\$2,206.61	\$28.91	1.3%	1.6%	1.6%	-1.5%	17	17	0
BROWN BROTHER HARRIMAN	\$2,152.20	\$2,817.57	-\$665.38	-23.6%	1.6%	2.1%	-25.8%	18	13	-5
FIRST REPUBLIC BANK	\$1,861.19	\$1,261.52	\$599.66	47.5%	1.3%	0.9%	43.4%	19	21	2
SOCIETE GENERALE	\$1,851.98	\$1,675.51	\$176.47	10.5%	1.3%	1.2%	7.4%	20	19	-1
STANDARD CHARTERED BANK	\$1,455.48	\$1,344.67	\$110.82	8.2%	1.0%	1.0%	5.2%	21	20	-1
FIDELITY	\$1,136.64	\$1,006.56	\$130.07	12.9%	0.8%	0.7%	9.8%	22	23	1
CACEIS	\$1,056.84	\$1,175.88	-\$119.05	-10.1%	0.8%	0.9%	-12.6%	23	22	-1
ROYAL BANK OF CANADA	\$1,003.96	\$965.01	\$38.94	4.0%	0.7%	0.7%	1.1%	24	24	0
BANK OF NOVA SCOTIA	\$895.70	\$816.55	\$79.16	9.7%	0.6%	0.6%	6.6%	25	25	0
TOP 25 CUSTODIANS FR - ALL	\$113,916.77	\$114,149.33	-\$232.56	-0.2%	82.1%	84.6%	-3.0%			
ALL OTHER	\$24,872.95	\$20,745.33	\$4,127.63	19.9%	17.9%	15.4%	16.5%			
TOTAL CUSTODIANS FR AUC DISCLOSED	\$138,789.72	\$134,894.66	\$3,895.06	2.9%	94.6%	94.6%	0.0%			
NOT REPORTED	\$4,645.42	\$4,531.68	\$113.73	2.5%	3.2%	3.2%	-0.4%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	\$3,232.03	\$3,135.10	\$96.93	3.1%	2.2%	2.2%	0.2%			
TOTAL ASSETS NOT DISCLOSING A CUSTODIANS FR	\$7,877.45	\$7,666.79	\$210.66	2.7%	5.4%	5.4%	-0.1%			

\$4,105.72

2.9%

100.0% 100.0%

0.0%

\$146,667.17 \$142,561.44

TOTAL FUND ASSETS

Fund Custodians Peer Analysis – Global AUC - Growth & Market Share

- Custodians ranked >25 registered the highest AUC growth
 - o AUC increased 19.90%, or 6.89x the market
 - o Market share increased from 15.38% to 17.92%
 - ➤ An increase of 16.53%
- Custodians ranked 1-10 registered the lowest AUC growth
 - o AUC decreased 2.10%, or -0.73x the market
 - O Market share decreased from 62.88% to 59.84%
 - A decrease of 4.84%

Peer G	Froup Perform	ance by Fund	Assets			
Custodians	Y-Y	Growth	SOM	SOM	SOM	SOM
Peer Group Analysis	Growth	vs-MKT	2023	2022	Change	Change %
Market Growth Assets	2.88%		100%	100%		
Market Growth Custodians Disclosed	2.89%	1.00	94.63%	94.62%	0.01%	0.01%
Custodians Ranked 1-10	-2.10%	-0.73	59.84%	62.88%	-3.05%	-4.84%
Custodians Ranked 11-25	5.27%	1.83	22.24%	21.74%	0.50%	2.32%
All Other Custodians	19.90%	6.89	17.92%	15.38%	2.54%	16.53%
Market Growth Custodians Not Disclosed	2.75%	0.95	5.37%	5.38%	-0.01%	-0.13%

Single Fund Custodians League Table – Global Funds

Convergence - 2023 League Tables - Single Custodians Market Segment - Fund Relationships											
Single	Jan -23	Jan -22	22-23	22-23	Market	Market	23-22	Jan -23	Jan -22	23-22	
Custodians	#FR	#FR	Change	Change %	Share-23	Share-22	Change %	Rank	Rank	Change	
STATE STREET IFS	12,401	12,128	273	2.3%	10.2%	10.3%	-0.9%	1	1	0	
BANK OF NEW YORK	10,325	9,971	354	3.6%	8.5%	8.5%	0.3%	2	2	0	
JPMORGAN	9,789	9,264	525	5.7%	8.1%	7.9%	2.4%	3	3	0	
SILICON VALLEY BANK	6,333	7,685	-1,352	-17.6%	5.2%	6.5%	-20.1%	4	4	0	
FIRST REPUBLIC BANK	5,851	5,399	452	8.4%	4.8%	4.6%	5.0%	5	5	0	
CITIBANK	4,728	4,697	31	0.7%	3.9%	4.0%	-2.5%	6	6	0	
BNP PARIBAS	4,333	3,944	389	9.9%	3.6%	3.3%	6.5%	7	7	0	
CACEIS	3,806	3,481	325	9.3%	3.1%	3.0%	6.0%	8	9	1	
NORTHERN TRUST	3,705	3,599	106	2.9%	3.0%	3.1%	-0.2%	9	8	-1	
US BANCORP	3,346	3,049	297	9.7%	2.8%	2.6%	6.3%	10	10	0	
BANK OF AMERICA	2,876	2,795	81	2.9%	2.4%	2.4%	-0.3%	11	11	0	
HSBC FINANCIAL SERVICES	2,689	2,466	223	9.0%	2.2%	2.1%	5.7%	12	12	0	
BROWN BROTHER HARRIMAN	2,273	2,236	37	1.7%	1.9%	1.9%	-1.5%	13	13	0	
ROYAL BANK OF CANADA	1,861	1,911	-50	-2.6%	1.5%	1.6%	-5.6%	14	14	0	
CREDIT SUISSE	1,743	1,702	41	2.4%	1.4%	1.4%	-0.8%	15	15	0	
SOCIETE GENERALE	1,572	1,629	-57	-3.5%	1.3%	1.4%	-6.5%	16	17	1	
WELLS FARGO	1,449	1,664	-215	-12.9%	1.2%	1.4%	-15.6%	17	16	-1	
UNION BANK OF SWITZERLAND	1,105	1,070	35	3.3%	0.9%	0.9%	0.1%	18	18	0	
DZ BANK	1,020	1,033	-13	-1.3%	0.8%	0.9%	-4.3%	19	19	0	
CITCO FUNDS SERVICES	866	713	153	21.5%	0.7%	0.6%	17.7%	20	23	3	
SKANDINAVISKA SECURITIES	861	811	50	6.2%	0.7%	0.7%	2.9%	21	20	-1	
INTERACTIVE BROKERS	822	718	104	14.5%	0.7%	0.6%	10.9%	22	22	0	
ROYAL BANK OF SCOTLAND	763	811	-48	-5.9%	0.6%	0.7%	-8.8%	23	20	-3	
HAUCK & AUFHAEUSER	698	649	49	7.6%	0.6%	0.6%	4.2%	24	26	2	
FIDELITY	684	615	69	11.2%	0.6%	0.5%	7.8%	25	29	4	
TOP 25 SINGLE CUSTODIANS FR	85,899	84,040	1,859	2.2%	70.7%	71.3%	-0.9%				
ALL OTHER	35,652	33,751	1,901	5.6%	29.3%	28.7%	2.4%				
TOTAL SINGLE CUSTODIANS FR DISCLOSED	121,551	117,791	3,760	3.2%	38.9%	42.6%	-8.7%				
NOT REPORTED	33,620	29,777	3,843	12.9%	10.7%	10.8%	-0.1%				
ELIGIBLE FUNDS - NOT ATTRIBUTED	57,927	41,920	16,007	38.2%	18.5%	15.1%	22.3%				
TOTAL FUNDS NOT DISCLOSING A CUSTODIANS FR	91,547	71,697	19,850	27.7%	29.3%	25.9%	13.0%				
TOTAL FUNDS WITH MULTI-CUSTODIANS FR	99,713	87,297	12,416	14.2%	31.9%	31.5%	1.1%				
TOTAL FUNDS	312,811	276,785	36,026	13.0%	100.0%	100.0%	0.0%				

Single Fund Custodians Peer Analysis – Global Funds - Growth and Market Share

- Custodians ranked >25 registered the highest growth in funds
 - o Funds increased 5.63%, or 1.76x the market
 - o Market share increased from 28.65% to 29.33%
 - ➤ An increase of 2.36%
- Custodians ranked 11-25 registered the lowest growth in funds
 - o Funds increased 2.20%, or 0.69x the market
 - o Market share decreased from 17.68% to 17.51%
 - ➤ A decrease of 0.96%

Peer G	roup Per	formance by F	und Relationships			
Custodians	Y-Y	Growth	SOM	SOM	SOM	SOM
Peer Group Analysis	Growth	vs-MKT	2023	2022	Change	Change %
Market Growth Funds	13.02%		100%	100%		
Market Growth Single Custodians Disclosed	3.19%	0.25	38.86%	42.56%	-3.70%	-8.69%
Custodians Ranked 1-10	2.21%	0.69	53.16%	53.67%	-0.51%	-0.95%
Custodians Ranked 11-25	2.20%	0.69	17.51%	17.68%	-0.17%	-0.96%
All Other Custodians	5.63%	1.76	29.33%	28.65%	0.68%	2.36%
Market Growth Multi Custodians Disclosed	14.22%	1.09	31.88%	31.54%	0.34%	1.07%
Market Growth Custodians Not Disclosed	27.69%	2.13	29.27%	25.90%	3.36%	12.98%

Single Fund Custodians League Table – Global AUC

Convergence - Jan 2023	League Tabl	les - Single C	ustodian <u>s</u> M	larket Segm	ent - Asset	ts (in BN)			Convergence - Jan 2023 League Tables - Single Custodians Market Segment - Assets (in BN)												
Single	Jan -23	Jan -22	22-23	22-23	Market		23-22	Jan -23	Jan -22	23-22											
Custodians	FR-AUC	FR-AUC	Change	Change %	Share-23	Share-22	Change %	Rank	Rank	Change											
STATE STREET IFS	\$13,210.99	\$15,511.25	-\$2,300.26	-14.8%	25.1%	26.2%	-4.3%	1	1	0											
JPMORGAN	\$10,797.80	\$12,976.24	-\$2,178.44	-16.8%	20.5%	21.9%	-6.5%	2	2	0											
BANK OF NEW YORK	\$8,173.12	\$8,676.03	-\$502.90	-5.8%	15.5%	14.7%	5.9%	3	3	0											
NORTHERN TRUST	\$2,024.95	\$2,346.85	-\$321.90	-13.7%	3.8%	4.0%	-3.0%	4	5	1											
BROWN BROTHER HARRIMAN	\$1,993.38	\$2,661.37	-\$667.99	-25.1%	3.8%	4.5%	-15.8%	5	4	-1											
CITIBANK	\$1,539.93	\$1,336.23	\$203.70	15.2%	2.9%	2.3%	29.5%	6	8	2											
BNP PARIBAS	\$1,405.00	\$1,574.02	-\$169.02	-10.7%	2.7%	2.7%	0.3%	7	6	-1											
US BANCORP	\$1,331.91	\$1,432.48	-\$100.57	-7.0%	2.5%	2.4%	4.5%	8	7	-1											
CACEIS	\$1,015.11	\$1,169.99	-\$154.88	-13.2%	1.9%	2.0%	-2.5%	9	9	0											
HSBC FINANCIAL SERVICES	\$882.34	\$887.70	-\$5.36	-0.6%	1.7%	1.5%	11.7%	10	10	0											
BANK OF AMERICA	\$803.88	\$761.41	\$42.47	5.6%	1.5%	1.3%	18.6%	11	11	0											
SILICON VALLEY BANK	\$759.83	\$535.29	\$224.54	41.9%	1.4%	0.9%	59.5%	12	14	2											
CREDIT SUISSE	\$604.03	\$647.69	-\$43.65	-6.7%	1.1%	1.1%	4.8%	13	12	-1											
FIRST REPUBLIC BANK	\$491.16	\$326.51	\$164.65	50.4%	0.9%	0.6%	69.0%	14	19	5											
DZ BANK	\$483.35	\$574.10	-\$90.75	-15.8%	0.9%	1.0%	-5.4%	15	13	-2											
UNION BANK OF SWITZERLAND	\$441.65	\$517.07	-\$75.42	-14.6%	0.8%	0.9%	-4.0%	16	15	-1											
SOCIETE GENERALE	\$352.85	\$508.27	-\$155.41	-30.6%	0.7%	0.9%	-22.0%	17	16	-1											
ROYAL BANK OF CANADA	\$350.93	\$435.84	-\$84.91	-19.5%	0.7%	0.7%	-9.5%	18	17	-1											
WELLS FARGO	\$331.48	\$314.07	\$17.41	5.5%	0.6%	0.5%	18.6%	19	20	1											
SKANDINAVISKA SECURITIES	\$256.87	\$350.45	-\$93.58	-26.7%	0.5%	0.6%	-17.6%	20	18	-2											
CITCO FUNDS SERVICES	\$253.50	\$193.60	\$59.90	30.9%	0.5%	0.3%	47.1%	21	24	3											
PICTET CIE EUROPE	\$241.86	\$273.68	-\$31.82	-11.6%	0.5%	0.5%	-0.7%	22	21	-1											
DEKABANK	\$209.50	\$244.98	-\$35.48	-14.5%	0.4%	0.4%	-3.9%	23	22	-1											
ZÜRCHER KANTONALBANK	\$161.81	\$169.82	-\$8.01	-4.7%	0.3%	0.3%	7.1%	24	27	3											
CECA	\$159.92	\$172.19	-\$12.27	-7.1%	0.3%	0.3%	4.4%	25	26	1											
TOP 25 SINGLE CUSTODIANS FR ASSETS	\$48,277.18	\$54,597.12	-\$6,319.94	-11.6%	91.6%	92.2%	-0.6%														
ALL OTHER	\$4,410.37	\$4,604.75	-\$194.38	-4.2%	8.4%	7.8%	7.6%														
TOTAL SINGLE CUSTODIANS FR ASSETS DISCLOSED	\$52,687.55	\$59,201.86	-\$6,514.31	-11.0%	35.9%	41.5%	-13.5%														
NOT REPORTED	\$4,645.42	\$4,531.68	\$113.73	2.5%	3.2%	3.2%	-0.4%														
ELIGIBLE FUNDS - NOT ATTRIBUTED	\$3,232.03	\$3,135.10	\$96.93	3.1%	2.2%	2.2%	0.2%														
TOTAL ASSETS NOT DISCLOSING A CUSTODIANS FR	\$7,877.45	\$7,666.79	\$210.66	2.7%	5.4%	5.4%	-0.1%														
TOTAL ASSETS WITH MULTI-CUSTODIANS FR	\$86,102.17	\$75,692.79	\$10,409.38	13.8%	58.7%	53.1%	10.6%														
TOTAL FUND ASSETS	\$146,667.17	\$142,561.44	\$4,105.72	2.9%	100.0%	100.0%	0.0%														

Single Custodians Peer Analysis – Global AUC - Growth & Market Share

- Custodians ranked 11-25 registered the highest AUC growth
 - o AUC decreased 2.03%, or -0.18x the market
 - o Market share increased from 10.18% to 11.20%
 - An increase of 10.08%
- Custodians ranked 1-10 registered the lowest AUC growth
 - o AUC decreased 12.76%, or -1.16x the market
 - Market share decreased from 82.04% to 80.43%
 - ➤ A decrease of 1.97%

Peer G	Froup Perform	ance by Fund	Assets			
Custodians	Y-Y	Growth	SOM	SOM	SOM	SOM
Peer Group Analysis	Growth	vs-MKT	2023	2022	Change	Change %
Market Growth Assets	2.88%		100%	100%		
Market Growth Single Custodians Disclosed	-11.00%	-3.82	35.92%	41.53%	-5.60%	-13.49%
Custodians Ranked 1-10	-12.76%	-1.16	80.43%	82.04%	-1.62%	-1.97%
Custodians Ranked 11-25	-2.03%	-0.18	11.20%	10.18%	1.03%	10.08%
All Other Custodians	-4.22%	-0.38	8.37%	7.78%	0.59%	7.62%
Market Growth Multi Custodians Disclosed	13.75%	4.78	58.71%	53.09%	5.61%	10.57%
Market Growth Custodians Not Disclosed	2.75%	0.95	5.37%	5.38%	-0.01%	-0.13%

Multi-Fund Custodians League Table – Global Funds

Convergence - 2023 League	Tables - N	Multi Cus	stodians l	Market Segi	nent - Fun	d Relatio	nships			
Multi	_	Jan -22	22-23	22-23		Market	23-22	Jan -23	Jan -22	23-22
Custodians	#FR	#FR		Change %					Rank	Change
BANK OF AMERICA	7,928	7,277	651	8.9%	8.0%	8.3%	-4.6%	1	1	0
FIRST REPUBLIC BANK	7,771	3,414	4,357	127.6%	7.8%	3.9%	99.3%	2	7	5
JPMORGAN	7,494	6,946	548	7.9%	7.5%	8.0%	-5.5%	3	2	-1
BANK OF NEW YORK	5,438	5,246	192	3.7%	5.5%	6.0%	-9.2%	4	3	-1
MORGAN STANLEY	5,329	4,850	479	9.9%	5.3%	5.6%	-3.8%	5	4	-1
SILICON VALLEY BANK	5,162	4,119	1,043	25.3%	5.2%	4.7%	9.7%	6	6	0
GOLDMAN SACHS BANK USA	4,986	4,723	263	5.6%	5.0%	5.4%	-7.6%	7	5	-2
CITIBANK	3,583	3,369	214	6.4%	3.6%	3.9%	-6.9%	8	8	0
WELLS FARGO	3,021	3,025	-4	-0.1%	3.0%	3.5%	-12.6%	9	9	0
NORTHERN TRUST	2,728	2,474	254	10.3%	2.7%	2.8%	-3.5%	10	10	0
STATE STREET IFS	2,054	2,039	15	0.7%	2.1%	2.3%	-11.8%	11	11	0
UNION BANK OF SWITZERLAND	2,009	1,996	13	0.7%	2.0%	2.3%	-11.9%	12	12	0
US BANCORP	1,906	1,759	147	8.4%	1.9%	2.0%	-5.1%	13	14	1
CREDIT SUISSE	1,484	1,793	-309	-17.2%	1.5%	2.1%	-27.5%	14	13	-1
DEUTSCHE BANK	1,429	1,591	-162	-10.2%	1.4%	1.8%	-21.4%	15	15	0
BNP PARIBAS	1,390	1,242	148	11.9%	1.4%	1.4%	-2.0%	16	16	0
BARCLAYS	1,308	1,212	96	7.9%	1.3%	1.4%	-5.5%	17	17	0
ESHARES	1,176	908	268	29.5%	1.2%	1.0%	13.4%	18	20	2
FIDELITY	1,156	1,116	40	3.6%	1.2%	1.3%	-9.3%	19	18	-1
HSBC FINANCIAL SERVICES	1,140	1,047	93	8.9%	1.1%	1.2%	-4.7%	20	19	-1
RAYMOND JAMES ASSOCIATES	940	682	258	37.8%	0.9%	0.8%	20.7%	21	23	2
CANADIAN IMPERIAL BANK OF COMMERCE	814	501	313	62.5%	0.8%	0.6%	42.2%	22	27	5
CITCO FUNDS SERVICES	781	880	-99	-11.3%	0.8%	1.0%	-22.3%	23	21	-2
SOCIETE GENERALE	752	664	88	13.3%	0.8%	0.8%	-0.8%	24	24	0
INTERACTIVE BROKERS	722	722	0	0.0%	0.7%	0.8%	-12.5%	25	22	-3
TOP 25 MULTI CUSTODIANS FR	72,501	63,595	8,906	14.0%	72.7%	72.8%	-0.2%			
ALL OTHER	27,212	23,702	3,510	14.8%	27.3%	27.2%	0.5%			
TOTAL MULTI CUSTODIANS FR	99,713	87,297	12,416	14.2%	31.9%	31.5%	1.1%			
NOT REPORTED	33,620	29,777	3,843	12.9%	10.7%	10.8%	-0.1%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	57,927	41,920	16,007	38.2%	18.5%	15.1%	22.3%			
TOTAL FUNDS NOT DISCLOSING A CUSTODIANS FR	91,547	71,697	19,850	27.7%	29.3%	25.9%	13.0%			
TOTAL FUNDS WITH SINGLE CUSTODIANS FR	121,551	117,791	3,760	3.2%	38.9%	42.6%	-8.7%			

13.0%

100.0%

100.0%

0.0%

312,811 276,785 36,026

TOTAL FUNDS

Multi-Fund Custodians Peer Analysis – Global Funds - Growth and Market Share

- Custodians ranked 1-10 registered the highest growth in funds
 - o Funds increased 17.60%, or 1.24x the market
 - o Market share increased from 52.06% to 53.59%
 - ➤ An increase of 2.95%
- Custodians ranked 11-25 registered the smallest growth in funds
 - o Funds increased 5.01%, or 0.35x the market
 - Market share decreased from 20.79% to 19.12%
 - ➤ A decrease of 8.07%

Peer G	roup Per	formance by F	und Relationships			
Custodians	Y-Y	Growth	SOM	SOM	SOM	SOM
Peer Group Analysis	Growth	vs-MKT	2023	2022	Change	Change %
Market Growth Funds	13.02%		100%	100%		
Market Growth Multi Custodians Disclosed	14.22%	1.09	31.88%	31.54%	0.34%	1.07%
Custodians Ranked 1-10	17.60%	1.24	53.59%	52.06%	1.54%	2.95%
Custodians Ranked 11-25	5.01%	0.35	19.12%	20.79%	-1.68%	-8.07%
All Other Custodians	14.81%	1.04	27.29%	27.15%	0.14%	0.51%
Market Growth Single Custodians Disclosed	3.19%	0.25	38.86%	42.56%	-3.70%	-8.69%
Market Growth Custodians Not Disclosed	27.69%	2.13	29.27%	25.90%	3.36%	12.98%

Multi-Fund Custodians League Table – Global AUC

Convergence - Jan 202.	R League Tab	les - Multi-C	ustodians M	Iarket Seam	ent - Assot	s (in RN)				
Multi	Jan -23	Jan -22	22-23	22-23		Market	23-22	Jan -23	Jan -22	23-22
Custodians	FR-AUC	FR-AUC	Change				Change %		Rank	Change
BANK OF AMERICA	\$6,681.86	\$6,174.70	\$507.16	8.2%	7.8%	8.2%	-4.9%	1	1	0
JPMORGAN	\$6,538.04	\$6,180.79	\$357.25	5.8%	7.6%	8.2%	-7.0%	2	7	5
BANK OF NEW YORK	\$5,663.91	\$5,864.89	-\$200.98	-3.4%	6.6%	7.7%	-15.1%	3	2	-1
MORGAN STANLEY	\$4,872.79	\$4,154.20	\$718.59	17.3%	5.7%	5.5%	3.1%	4	3	-1
CITIBANK	\$4,557.03	\$3,877.02	\$680.01	17.5%	5.3%	5.1%	3.3%	5	4	-1
GOLDMAN SACHS BANK USA	\$4,457.26	\$4,101.87	\$355.39	8.7%	5.2%	5.4%	-4.5%	6	6	0
BARCLAYS	\$3,710.28	\$3,766.20	-\$55.91	-1.5%	4.3%	5.0%	-13.4%	7	5	-2
STATE STREET IFS	\$3,208.69	\$2,886.50	\$322.19	11.2%	3.7%	3.8%	-2.3%	8	8	0
UNION BANK OF SWITZERLAND	\$3,205.12	\$2,875.36	\$329.76	11.5%	3.7%	3.8%	-2.0%	9	9	0
CREDIT SUISSE	\$2,905.52	\$2,876.74	\$28.78	1.0%	3.4%	3.8%	-11.2%	10	10	0
BNP PARIBAS	\$2,653.09	\$1,994.28	\$658.81	33.0%	3.1%	2.6%	17.0%	11	11	0
NORTHERN TRUST	\$2,572.04	\$2,497.10	\$74.94	3.0%	3.0%	3.3%	-9.5%	12	12	0
WELLS FARGO	\$2,434.56	\$2,272.81	\$161.75	7.1%	2.8%	3.0%	-5.8%	13	14	1
DEUTSCHE BANK	\$2,209.80	\$2,234.08	-\$24.28	-1.1%	2.6%	3.0%	-13.0%	14	13	-1
HSBC FINANCIAL SERVICES	\$1,713.80	\$1,528.96	\$184.84	12.1%	2.0%	2.0%	-1.5%	15	15	0
SILICON VALLEY BANK	\$1,597.79	\$1,231.60	\$366.18	29.7%	1.9%	1.6%	14.0%	16	16	0
SOCIETE GENERALE	\$1,499.12	\$1,167.24	\$331.88	28.4%	1.7%	1.5%	12.9%	17	17	0
STANDARD CHARTERED BANK	\$1,441.17	\$1,330.75	\$110.42	8.3%	1.7%	1.8%	-4.8%	18	20	2
FIRST REPUBLIC BANK	\$1,370.02	\$935.01	\$435.01	46.5%	1.6%	1.2%	28.8%	19	18	-1
FIDELITY	\$1,093.43	\$977.66	\$115.77	11.8%	1.3%	1.3%	-1.7%	20	19	-1
US BANCORP	\$903.62	\$774.13	\$129.49	16.7%	1.0%	1.0%	2.6%	21	23	2
BANK OF NOVA SCOTIA	\$887.66	\$811.33	\$76.32	9.4%	1.0%	1.1%	-3.8%	22	27	5
COMPUTERSHARE	\$756.57	\$534.82	\$221.74	41.5%	0.9%	0.7%	24.4%	23	21	-2
NOMURA BANK LUXEMBOURG SA	\$725.37	\$688.41	\$36.96	5.4%	0.8%	0.9%	-7.4%	24	24	0
ROYAL BANK OF CANADA	\$653.02	\$529.17	\$123.85	23.4%	0.8%	0.7%	8.5%	25	22	-3
TOP 25 MULTI CUSTODIANS FR ASSETS	\$68,311.56	\$62,265.62	\$6,045.94	9.7%	79.3%	82.3%	-3.6%			
ALL OTHER	\$17,790.61	\$13,427.18	\$4,363.44	32.5%	20.7%	17.7%	16.5%			
TOTAL MULTI CUSTODIANS FR ASSETS	\$86,102.17	\$75,692.79	\$10,409.38	13.8%	58.7%	53.1%	10.6%			
NOT REPORTED	\$4,645.42	\$4,531.68	\$113.73	2.5%	3.2%	3.2%	-0.4%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	\$3,232.03	\$3,135.10	\$96.93	3.1%	2.2%	2.2%	0.2%			
TOTAL ASSETS NOT DISCLOSING A CUSTODIANS FR	\$7,877.45	\$7,666.79	\$210.66	2.7%	5.4%	5.4%	-0.1%			
TOTAL ASSETS WITH SINGLE CUSTODIANS FR	\$52,687.55	\$59,201.86	-\$6,514.31	-11.0%	35.9%	41.5%	-13.5%			
TOTAL FUND ASSETS	\$146,667,17	\$142,561.44	\$4,105,72	2.9%	100.0%	100.0%	0.0%			

Custodians Peer Groups – Global Multi AUC Growth & Market Share

- Custodians ranked >25 registered the highest AUC growth
 - o AUC increased 32.50%, or 2.36x the market
 - o Market share increased from 17.74% to 20.66%
 - ➤ An increase of 16.48%
- Custodians ranked 1-10 registered the lowest AUC growth
 - o AUC increased 7.11%, or 0.52x the market
 - Market share decreased from 56.49% to 53.19%
 - A decrease of 5.83%

Peer Group Performance by Fund Assets						
Custodians	Y-Y	Growth	SOM	SOM	SOM	SOM
Peer Group Analysis	Growth	vs-MKT	2023	2022	Change	Change %
Market Growth Assets	2.88%		100%	100%		
Market Growth Multi Custodians Disclosed	13.75%	4.78	58.71%	53.09%	5.61%	10.57%
Custodians Ranked 1-10	7.11%	0.52	53.19%	56.49%	-3.30%	-5.83%
Custodians Ranked 11-25	15.40%	1.12	26.14%	25.77%	0.37%	1.45%
All Other Custodians	32.50%	2.36	20.66%	17.74%	2.92%	16.48%
Market Growth Single Custodians Disclosed	-11.00%	-3.82	35.92%	41.53%	-5.60%	-13.49%
Market Growth Custodians Not Disclosed	2.75%	0.95	5.37%	5.38%	-0.01%	-0.13%

About Convergence

- Founded in 2013, Convergence provides independent <u>insights</u> 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 <u>insights</u> help clients grow revenue, <u>improve efficiency</u> and <u>identify and manage risks</u>.
- Our <u>clients</u> include Asset Managers, Institutional Investors and Service Providers.
- Our <u>founders</u>, 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 Custodians 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 Custodians.

US Funds and Assets

 Measures public and private funds and assets domiciled in the US that Convergence can attribute to one or more Fund Custodians.

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 Custodians.

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 Custodians.

All Other Custodians

Is a measure of funds and assets attributed to Fund Custodians ranked outside the Top 25.

Terms Used in Our Fund Custodians League Tables

• Single/Multiple Relationship

o A "Single" Custodians relationship exists at the fund level when the adviser discloses one Custodians to their fund and a "Multiple" Custodians exists when more than one Custodians is named.

Total Fund/Asset Custodians Relationships

O Total Funds refer to an overall number of funds available in the market and Total Assets refer to the overall assets available in the market.

• Total Fund/Asset Custodians Single Relationships

Total Funds in single relationships means, total funds in the market for those who have only single-Custodians relationship and Total Assets in single relationship means total assets in the market for those who have only single-Custodians relationship.

• Total Fund/Asset Custodians Multiple Relationships

 Total Funds in multiple relationships means, total assets in the market for those who have multi-Custodians relationship and Total Assets in multiple relationship means total assets in the market for those who have multi-Custodians relationship.

Unique Fund/Asset Custodians Single Relationships

 Measures unique Funds in single relationships means, unique funds in the market for those who have only single Custodians relationship.

Unique Fund/Asset Custodians Multiple Relationships

 Measures unique Funds in multiple relationships means, unique funds in the market for those who have multi-Custodians relationship.

Total Fund/Asset Market

O Total Fund includes all the funds in the market plus all the unique funds. Similarly, Total Asset Market means all the assets in the market plus all the unique assets.

Additional Analytics available for the Custodians 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)

- o Compare your growth and market share to a defined peer group in multiple fund type segments
- o 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
- o Allows you to determine if you are getting your fair share of the change

• Clients at Risk (Client Management)

O 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

Career History

Apollo Global Management-Fund Group: CFO/COO, Rohatyn Group: CFO/COO, JPMorgan [Various Divisions]: CFO, Fidelity Alternative Investments: Director of Operations iphinney@convergenceinc.com



George Evans, Co-President and Chief Revenue Officer

Career History

Gladstone Associates: Managing Director, GlobeOp Financial, Outsource Partners International, BISYS Financial Services: Global Head of Business Development, JPMorgan Investor Services: Senior Vice President, The Prudential: Assistant Treasurer gevans@convergenceinc.com



Eileen Cleary, President, Convergence Talent Management

Career History

Executive Management Consultant, Atlas Data: Chief Executive Officer and Co-founder, J. & W. Seligman & Co. Incorporated: V.P. Human Resources, UJB-Financial: V.P. Employee Benefits ecleary@convergenceinc.com



George Gainer, CPA Global Head - Client Management

Career History

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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Vidya Minukuri, Global Head of Data Science & Research

Career History

Tata Consultancy Services: Assistant Business Consultant & Project Manager, British Telecom [through TCS]: Lead Business Analyst & Solution Architect, Ericsson [through TCS]: IT Systems Engineer and IT development team leader



Career History

Nod Hill Investment Partners, Founder, Steinberg Asset Management, Managing Director, Fidelity Investments / Pyramis 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

David Etzbach, Managing Director, Custodians and Allocators

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Career History

Goldman Sachs - Prime Brokerage, Morgan Stanley, Prime Brokerage, Director Client Service & Control. Tiger Management, Director of Middle Office Operations, Credit Suisse: Director of Hedge Fund Services, Rothstein Kass- Advisory Principal HC Associates, LLC - President and Chief Operating Officer



