Fund Custodians League Tables

Global Funds and AUC

Reporting Period Mar 2022 - Mar 2023



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:
 - o SEC registered private and public funds and advisers
 - State registered private and public funds and advisers
 - o Unregistered private funds and advisers
 - EU UCITS and private funds
 - o 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" custodians
 - Funds that use "multiple" custodians
- Additional Fund custodians League Tables for custodians Funds and AUC 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+)

Custodians League Table - Global Funds

Convergence - Mar 2023 Le	ague Tab	les - Cust	odians M	[arket Segm	ent - Fund	l Relation	ships			
All	0	Mar -22		22-23	Market		23-22	Mar -23	Mar -22	23-22
Custodians	#FR	#FR					Change %			Change
JPMORGAN	17,874	16,530	1,344	8.1%	7.9%	8.0%	-0.2%	1	1	0
BANK OF NEW YORK	16,278	15,424	854	5.5%	7.2%	7.4%	-2.6%	2	2	0
STATE STREET IFS	14,517	14,078	439	3.1%	6.5%	6.8%	-4.8%	3	3	0
FIRST REPUBLIC BANK	14,054	9,154	4,900	53.5%	6.2%	4.4%	41.7%	4	6	2
BANK OF AMERICA	11,081	10,208	873	8.6%	4.9%	4.9%	0.2%	5	5	0
SILICON VALLEY BANK	10,826	12,413	-1,587	-12.8%	4.8%	6.0%	-19.5%	6	4	-2
CITIBANK	8,580	7,998	582	7.3%	3.8%	3.9%	-1.0%	7	7	0
NORTHERN TRUST	6,497	6,126	371	6.1%	2.9%	2.9%	-2.1%	8	8	0
MORGAN STANLEY	6,134	5,579	555	9.9%	2.7%	2.7%	1.5%	9	9	0
GOLDMAN SACHS BANK USA	5,754	5,386	368	6.8%	2.6%	2.6%	-1.4%	10	10	0
BNP PARIBAS	5,678	5,254	424	8.1%	2.5%	2.5%	-0.2%	11	11	0
US BANCORP	5,322	4,928	394	8.0%	2.4%	2.4%	-0.3%	12	12	0
WELLS FARGO	4,370	4,491	-121	-2.7%	1.9%	2.2%	-10.2%	13	13	0
HSBC FINANCIAL SERVICES	3,884	3,506	378	10.8%	1.7%	1.7%	2.3%	14	15	1
CACEIS	3,852	3,616	236	6.5%	1.7%	1.7%	-1.7%	15	14	-1
UNION BANK OF SWITZERLAND	3,051	3,015	36	1.2%	1.4%	1.5%	-6.6%	16	17	1
CREDIT SUISSE	2,965	3,364	-399	-11.9%	1.3%	1.6%	-18.6%	17	16	-1
BROWN BROTHER HARRIMAN	2,507	2,446	61	2.5%	1.1%	1.2%	-5.4%	18	18	0
SOCIETE GENERALE	2,375	2,199	176	8.0%	1.1%	1.1%	-0.3%	19	20	1
ROYAL BANK OF CANADA	2,227	2,243	-16	-0.7%	1.0%	1.1%	-8.3%	20	19	-1
DEUTSCHE BANK	2,056	2,161	-105	-4.9%	0.9%	1.0%	-12.2%	21	21	0
FIDELITY	1,908	1,803	105	5.8%	0.8%	0.9%	-2.3%	22	22	0
INTERACTIVE BROKERS	1,567	1,470	97	6.6%	0.7%	0.7%	-1.6%	23	24	1
CITCO FUNDS SERVICES	1,549	1,675	-126	-7.5%	0.7%	0.8%	-14.6%	24	23	-1
BARCLAYS	1,492	1,380	112	8.1%	0.7%	0.7%	-0.2%	25	25	0
TOP 25 CUSTODIANS FR - ALL	156,398	146,447	9,951	6.8%	69.5%	70.5%	-1.4%			
ALL OTHER	68,613	61,284	7,329	12.0%	30.5%	29.5%	3.4%			
TOTAL CUSTODIANS FR DISCLOSED	225,011	207,731	17,280	8.3%	70.9%	73.7%	-3.8%			
NOT REPORTED	34,073	31,126	2,947	9.5%	10.7%	11.0%	-2.8%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	58,362	42,965	15,397	35.8%	18.4%	15.2%	20.6%			
TOTAL FUNDS NOT DISCLOSING A CUSTODIANS FR	92,435	74,091	18,344	24.8%	29.1%	26.3%	10.8%			
TOTAL FUNDS	317,446	281,822	35,624	12.6%	100.0%	100.0%	0.0%			

- Custodians ranked >25 registered the highest growth in funds
 - Funds increased 11.96%, or 1.44x the market
 - Market share increased from 29.50% to 30.49%
 - ➤ An increase of 3.36%
- Custodians ranked 11-25 registered the lowest growth in funds
 - Funds increased 2.87%, or 0.35x the market
 - Market share decreased from 20.97% to 19.91%
 - \blacktriangleright A decrease of 5.03%

Peer (Group Perf	ormance 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	12.64%		100%	100%		
Market Growth Custodians Disclosed	8.32%	0.66	70.88%	73.71%	-2.83%	-3.84%
Custodians Ranked 1-10	8.45%	1.02	49.60%	49.53%	0.06%	0.13%
Custodians Ranked 11-25	2.87%	0.35	19.91%	20.97%	-1.05%	-5.03%
All Other Custodians	11.96%	1.44	30.49%	29.50%	0.99%	3.36%
Market Growth Custodians Not Disclosed	24.76%	1.96	29.12%	26.29%	2.83%	10.76%

Fund Custodians League Table – Global AUC

	2022 T		1	1 4 6						
Convergence - Mar All	2023 League Mar -23		22-23	<u> </u>	t - Assets Market		23-22	Mar -23	Man 22	22.22
All Custodians	Mar -23 FR-AUC	Mar -22 FR-AUC		22-23			23-22 Change %		Mar -22 Rank	23-22 Change
		\$17,568.20	Change \$58.87	0.3%	12.8%	Share-22 13.0%	-1.7%			Change
JPMORGAN STATE STREET IFS	\$17,627.07	\$17,568.20 \$17,400.08	\$58.87 -\$812.35	-4.7%	12.8% 12.0%	13.0% 12.9%	-1.7% -6.6%	1	1	0
BANK OF NEW YORK	\$16,587.73 \$14,003.23	\$17,400.08 \$14,423.31	-\$812.35 -\$420.08	-4.7% -2.9%	12.0% 10.2%	12.9% 10.7%	-6.6% -4.9%	2 3	2 3	0
BANK OF NEW YORK BANK OF AMERICA	\$14,003.23	\$14,425.51 \$7,236.20	-\$420.08 \$130.17	-2.9% 1.8%	10.2% 5.4%	10.7% 5.4%	-4.9% -0.3%	3 4	3 4	0
CITIBANK	\$7,366.37 \$5,990.11	\$7,236.20 \$5,482.77	\$130.17 \$507.34	1.8% 9.3%	5.4% 4.4%	5.4% 4.1%	-0.3% 7.0%	4 5	4 5	0
MORGAN STANLEY	\$5,990.11 \$4,722.37	\$5,482.77 \$4,480.94	\$507.34 \$241.43	9.3% 5.4%	4.4% 3.4%	4.1% 3.3%	7.0% 3.2%	5	5 7	0
NORTHERN TRUST	\$4,722.37 \$4,466.53	\$4,480.94 \$4,790.99	\$241.43 -\$324.46	5.4% -6.8%	3.4% 3.2%	3.3% 3.6%	-8.7%	6 7	6	-1
		. ,	-					-	-	
GOLDMAN SACHS BANK USA BNP PARIBAS	\$4,440.49 \$3,973.89	\$4,277.46 \$3,653.34	\$163.03 \$320.55	3.8% 8.8%	3.2% 2.9%	3.2% 2.7%	1.7% 6.5%	8 9	8 10	0 1
BARCLAYS	\$3,973.89	\$3,996.60	\$320.55 -\$376.77		2.9% 2.6%	2.7%		9 10	10 9	-1
		. ,	-	-9.4%			-11.3%		,	_
UNION BANK OF SWITZERLAND	\$3,537.09	\$3,483.05 \$3,456.78	\$54.05 -\$697.16	1.6%	2.6% 2.0%	2.6% 2.6%	-0.5% -21.8%	11 12	11 12	0 0
CREDIT SUISSE	\$2,759.62	\$3,456.78 \$2,651.56	-	-20.2%					12	0
WELLS FARGO HSBC FINANCIAL SERVICES	\$2,712.29	\$2,651.56	\$60.73 \$72.72	2.3% 2.9%	2.0%	2.0% 1.9%	0.2% 0.8%	13 14	13 15	
	\$2,569.08 \$2,217.62	\$2,496.35	\$72.72		1.9%			14 15	15 18	1
SILICON VALLEY BANK	\$2,317.63	\$2,070.48	\$247.15	11.9%	1.7%	1.5%	9.6%			3
DEUTSCHE BANK	\$2,307.76	\$2,315.91 \$2,207.25	-\$8.15	-0.4%	1.7%	1.7%	-2.4%	16	16 17	0
US BANCORP	\$2,242.38	\$2,207.35	\$35.03	1.6%	1.6%	1.6%	-0.5%	17	-	0
BROWN BROTHER HARRIMAN	\$2,183.33	\$2,629.22	-\$445.89	-17.0%	1.6%	1.9%	-18.7%	18	14	-4
FIRST REPUBLIC BANK	\$1,915.99	\$1,448.02	\$467.97 \$201.58	32.3%	1.4%	1.1%	29.6%	19	20	1
SOCIETE GENERALE	\$1,841.52	\$1,639.94 \$1,275.10	\$201.58	12.3%	1.3%	1.2%	10.0%	20	19 21	-1
STANDARD CHARTERED BANK	\$1,466.93	\$1,375.10	\$91.83	6.7%	1.1%	1.0%	4.5%	21	21	0
CACEIS	\$1,092.07	\$1,175.18	-\$83.11	-7.1%	0.8%	0.9%	-9.0%	22	22	0
FIDELITY	\$1,082.74	\$1,095.33	-\$12.60	-1.2%	0.8%	0.8%	-3.2%	23	23	0
ROYAL BANK OF CANADA	\$991.15 \$016.62	\$1,035.30	-\$44.16	-4.3%	0.7%	0.8%	-6.2%	24	24 25	0
BANK OF NOVA SCOTIA	\$916.63	\$814.92	\$101.71	12.5%	0.7%	0.6%	10.2%	25	25	0
TOP 25 CUSTODIANS FR - ALL		\$113,204.39	-\$470.57	-0.4%	81.9%	83.9%	-2.5%			
ALL OTHER	\$24,951.87	\$21,643.82	\$3,308.05	15.3%	18.1%	16.1%	12.9%			
TOTAL CUSTODIANS FR AUC DISCLOSED	\$137,685.69		\$2,837.48	2.1%	94.7%	94.5%	0.1%			
NOT REPORTED	\$4,577.70	\$4,698.27	-\$120.57	-2.6%	3.1%	3.3%	-4.4%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	\$3,194.19	\$3,106.41	\$87.77	2.8%	2.2%	2.2%	0.8%			
TOTAL ASSETS NOT DISCLOSING A CUSTODIANS FR	\$7,771.89	\$7,804.68	-\$32.80	-0.4%	5.3%	5.5%	-2.3%			
TOTAL FUND ASSETS	\$145,457.57	\$142,652.90	\$2,804.68	2.0%	100.0%	100.0%	0.0%			

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

- Custodians ranked >25 registered the highest AUC growth
 - AUC increased 15.28%, or 7.26x the market
 - Market share increased from 16.05% to 18.12%
 - \blacktriangleright An increase of 12.91%
- Custodians ranked 1-10 registered the lowest AUC growth
 - AUC decreased 0.61%, or -0.29x the market
 - Market share decreased from 61.78% to 60.14%
 - \blacktriangleright A decrease of 2.66%

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	1.97%		100%	100%		
Market Growth Custodians Disclosed	2.10%	1.07	94.66%	94.53%	0.13%	0.14%
Custodians Ranked 1-10	-0.61%	-0.29	60.14%	61.78%	-1.65%	-2.66%
Custodians Ranked 11-25	0.14%	0.07	21.74%	22.17%	-0.43%	-1.92%
All Other Custodians	15.28%	7.26	18.12%	16.05%	2.07%	12.91%
Market Growth Custodians Not Disclosed	-0.42%	-0.21	5.34%	5.47%	-0.13%	-2.34%

Single Fund Custodians League Table – Global Funds

Convergence - 2023 League	Tables - S	Single <u>Cu</u>	stodia <u>ns</u>	Market <u>Seg</u>	ment - <u>Fu</u>	nd Rela <u>tio</u>	nships			
Single		Mar -22		22-23	Market	Market	23-22	Mar -23	Mar -22	23-22
Custodians	#FR	#FR	Change	Change %	Share-23	Share-22	Change %	Rank	Rank	Change
STATE STREET IFS	12,498	12,126	372	3.1%	10.2%	10.4%	-1.8%	1	1	0
BANK OF NEW YORK	10,595	10,062	533	5.3%	8.7%	8.6%	0.3%	2	2	0
JPMORGAN	10,016	9,447	569	6.0%	8.2%	8.1%	1.0%	3	3	0
FIRST REPUBLIC BANK	6,110	5,716	394	6.9%	5.0%	4.9%	1.8%	4	4	0
SILICON VALLEY BANK	5,731	5,330	401	7.5%	4.7%	4.6%	2.4%	5	5	0
CITIBANK	4,869	4,610	259	5.6%	4.0%	4.0%	0.6%	6	6	0
BNP PARIBAS	4,284	3,974	310	7.8%	3.5%	3.4%	2.7%	7	7	0
CACEIS	3,829	3,591	238	6.6%	3.1%	3.1%	1.6%	8	8	0
NORTHERN TRUST	3,725	3,591	134	3.7%	3.0%	3.1%	-1.2%	9	8	-1
US BANCORP	3,334	3,151	183	5.8%	2.7%	2.7%	0.8%	10	9	-1
BANK OF AMERICA	2,934	2,874	60	2.1%	2.4%	2.5%	-2.7%	11	10	-1
HSBC FINANCIAL SERVICES	2,722	2,450	272	11.1%	2.2%	2.1%	5.8%	12	11	-1
BROWN BROTHER HARRIMAN	2,276	2,261	15	0.7%	1.9%	1.9%	-4.1%	13	12	-1
ROYAL BANK OF CANADA	1,863	1,903	-40	-2.1%	1.5%	1.6%	-6.7%	14	13	-1
CREDIT SUISSE	1,734	1,722	12	0.7%	1.4%	1.5%	-4.1%	15	14	-1
SOCIETE GENERALE	1,603	1,537	66	4.3%	1.3%	1.3%	-0.6%	16	15	-1
WELLS FARGO	1,424	1,529	-105	-6.9%	1.2%	1.3%	-11.3%	17	16	-1
UNION BANK OF SWITZERLAND	1,094	1,073	21	2.0%	0.9%	0.9%	-2.9%	18	17	-1
DZ BANK	1,029	1,030	-1	-0.1%	0.8%	0.9%	-4.8%	19	18	-1
SKANDINAVISKA SECURITIES	861	836	25	3.0%	0.7%	0.7%	-1.9%	20	19	-1
INTERACTIVE BROKERS	806	760	46	6.1%	0.7%	0.7%	1.0%	21	22	1
CITCO FUNDS SERVICES	754	780	-26	-3.3%	0.6%	0.7%	-7.9%	22	21	-1
ROYAL BANK OF SCOTLAND	751	790	-39	-4.9%	0.6%	0.7%	-9.4%	23	20	-3
HAUCK & AUFHAEUSER	703	655	48	7.3%	0.6%	0.6%	2.3%	24	25	1
GOLDMAN SACHS BANK USA	681	626	55	8.8%	0.6%	0.5%	3.6%	25	27	2
TOP 25 SINGLE CUSTODIANS FR	86,226	82,424	3,802	4.6%	70.4%	70.7%	-0.3%			
ALL OTHER	36,175	34,186	1,989	5.8%	29.6%	29.3%	0.8%			
TOTAL SINGLE CUSTODIANS FR DISCLOSED	122,401	116,610	5,791	5.0%	38.6%	41.4%	-6.8%			
NOT REPORTED	34,073	31,126	2,947	9.5%	10.7%	11.0%	-2.8%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	58,362	42,965	15,397	35.8%	18.4%	15.2%	20.6%			
TOTAL FUNDS NOT DISCLOSING A CUSTODIANS FR	92,435	74,091	18,344	24.8%	29.1%	26.3%	10.8%			
TOTAL FUNDS WITH MULTI-CUSTODIANS FR	102,610	91,121	11,489	12.6%	32.3%	32.3%	0.0%			
TOTAL FUNDS	317,446	281,822	35,624	12.6%	100.0%	100.0%	0.0%			

- Custodians ranked >25 registered the highest growth in funds
 - Funds increased 5.82%, or 1.17x the market
 - Market share increased from 29.32% to 29.55%
 - \blacktriangleright An increase of 0.81%
- Custodians ranked 11-25 registered the lowest growth in funds
 - Funds increased 1.96%, or 0.40x the market
 - Market share decreased from 17.86% to 17.35%
 - \blacktriangleright A decrease of 2.86%

Peer (Froup Perf	ormance 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	12.64%		100%	100%		
Market Growth Single Custodians Disclosed	4.97%	0.39	38.56%	41.38%	-2.82%	-6.81%
Custodians Ranked 1-10	5.51%	1.11	53.10%	52.82%	0.27%	0.52%
Custodians Ranked 11-25	1.96%	0.40	17.35%	17.86%	-0.51%	-2.86%
All Other Custodians	5.82%	1.17	29.55%	29.32%	0.24%	0.81%
Market Growth Multi Custodians Disclosed	12.61%	1.00	32.32%	32.33%	-0.01%	-0.03%
Market Growth Custodians Not Disclosed	24.76%	1.96	29.12%	26.29%	2.83%	10.76%

Single Fund Custodians League Table – Global AUC

Convergence - Mar 202	3 League Tab	les - Single (^r ustodians I	Market Soor	nent - Ass	ets (in RN)			
Single	Mar -23	Mar -22	22-23	22-23	Market		23-22	Mar -23	Mar -22	23-22
Custodians	FR-AUC	FR-AUC					Change %	Rank	Rank	Change
STATE STREET IFS	\$13,480.48	\$14,546.12	-\$1,065.64	-7.3%	25.2%	26.0%	-3.1%	1	1	0
JPMORGAN	\$11,172.24	\$11,189.30	-\$17.06	-0.2%	20.9%	20.0%	4.4%	2	2	0
BANK OF NEW YORK	\$8,338.31	\$8,451.60	-\$113.29	-1.3%	15.6%	15.1%	3.2%	3	3	0
BROWN BROTHER HARRIMAN	\$2,048.82	\$2,522.43	-\$473.61	-18.8%	3.8%	4.5%	-15.1%	4	4	0
NORTHERN TRUST	\$2,018.53	\$2,241.57	-\$223.04	-10.0%	3.8%	4.0%	-5.8%	5	5	0
CITIBANK	\$1,499.85	\$1,409.49	\$90.37	6.4%	2.8%	2.5%	11.3%	6	8	2
BNP PARIBAS	\$1,479.58	\$1,499.95	-\$20.37	-1.4%	2.8%	2.7%	3.2%	7	6	-1
US BANCORP	\$1,351.67	\$1,411.33	-\$59.65	-4.2%	2.5%	2.5%	0.2%	8	7	-1
CACEIS	\$1,050.60	\$1,169.29	-\$118.70	-10.2%	2.0%	2.1%	-6.0%	9	9	0
HSBC FINANCIAL SERVICES	\$902.38	\$945.53	-\$43.15	-4.6%	1.7%	1.7%	-0.2%	10	10	0
BANK OF AMERICA	\$822.10	\$814.55	\$7.55	0.9%	1.5%	1.5%	5.6%	11	11	0
SILICON VALLEY BANK	\$655.25	\$644.09	\$11.16	1.7%	1.2%	1.1%	6.4%	12	12	0
CREDIT SUISSE	\$603.63	\$641.46	-\$37.83	-5.9%	1.1%	1.1%	-1.6%	13	13	0
DZ BANK	\$490.37	\$555.29	-\$64.92	-11.7%	0.9%	1.0%	-7.6%	14	14	0
FIRST REPUBLIC BANK	\$455.80	\$365.39	\$90.41	24.7%	0.9%	0.7%	30.5%	15	18	3
UNION BANK OF SWITZERLAND	\$431.18	\$495.58	-\$64.41	-13.0%	0.8%	0.9%	-9.0%	16	15	-1
ROYAL BANK OF CANADA	\$361.53	\$423.14	-\$61.61	-14.6%	0.7%	0.8%	-10.6%	17	16	-1
SOCIETE GENERALE	\$350.06	\$403.22	-\$53.15	-13.2%	0.7%	0.7%	-9.2%	18	17	-1
WELLS FARGO	\$312.72	\$326.66	-\$13.94	-4.3%	0.6%	0.6%	0.1%	19	19	0
SKANDINAVISKA SECURITIES	\$262.01	\$306.83	-\$44.83	-14.6%	0.5%	0.5%	-10.7%	20	20	0
PICTET CIE EUROPE	\$245.00	\$251.86	-\$6.86	-2.7%	0.5%	0.4%	1.7%	21	21	0
CITCO FUNDS SERVICES	\$230.82	\$201.59	\$29.23	14.5%	0.4%	0.4%	19.7%	22	23	1
DEKABANK	\$213.72	\$234.80	-\$21.08	-9.0%	0.4%	0.4%	-4.8%	23	22	-1
ZÜRCHER KANTONALBANK	\$166.73	\$161.82	\$4.91	3.0%	0.3%	0.3%	7.8%	24	26	2
CECA	\$166.59	\$163.94	\$2.65	1.6%	0.3%	0.3%	6.3%	25	25	0
TOP 25 SINGLE CUSTODIANS FR ASSETS	\$49,109.96	\$51,376.85	-\$2,266.89	-4.4%	91.7%	91.7%	0.0%			
ALL OTHER	\$4,456.27	\$4,643.41	-\$187.14	-4.0%	8.3%	8.3%	0.4%			
TOTAL SINGLE CUSTODIANS FR ASSETS DISCLOSED	\$53,566.23	\$56,020.25	-\$2,454.02	-4.4%	36.8%	39.3%	-6.2%			
NOT REPORTED	\$4,577.70	\$4,698.27	-\$120.57	-2.6%	3.1%	3.3%	-4.4%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	\$3,194.19	\$3,106.41	\$87.77	2.8%	2.2%	2.2%	0.8%			
TOTAL ASSETS NOT DISCLOSING A CUSTODIANS FR	\$7,771.89	\$7,804.68	-\$32.80	-0.4%	5.3%	5.5%	-2.3%			
TOTAL ASSETS WITH MULTI-CUSTODIANS FR	\$84,119.46	\$78,827.96	\$5,291.50	6.7%	57.8%	55.3%	4.7%			
TOTAL FUND ASSETS	\$145,457.57	\$142,652.90	\$2,804.68	2.0%	100.0%	100.0%	0.0%			

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

- Custodians ranked 11-25 registered the highest AUC growth
 - AUC decreased 3.72%, or -0.85x the market
 - Market share increased from 10.69% to 10.77%
 - \blacktriangleright An increase of 0.69%
- Custodians ranked 1-10 registered the lowest AUC growth
 - \circ AUC decreased 4.50%, or -1.03x the market
 - Market share decreased from 81.02% to 80.91%
 - \blacktriangleright A decrease of 0.13%

Peer G	Froup Perform	nance by Fund	Assets			
Custodians	Y-Y	Growth	SOM	SOM	SOM	SOM
Peer Group Analysis	Growth	vs-MKT	2023	2022	Change	Change %
Market Growth Assets	1.97%		100%	100%		
Market Growth Single Custodians Disclosed	-4.38%	-2.23	36.83%	39.27%	-2.44%	-6.22%
Custodians Ranked 1-10	-4.50%	-1.03	80.91%	81.02%	-0.10%	-0.13%
Custodians Ranked 11-25	-3.72%	-0.85	10.77%	10.69%	0.07%	0.69%
All Other Custodians	-4.03%	-0.92	8.32%	8.29%	0.03%	0.37%
Market Growth Multi Custodians Disclosed	6.71%	3.41	57.83%	55.26%	2.57%	4.66%
Market Growth Custodians Not Disclosed	-0.42%	-0.21	5.34%	5.47%	-0.13%	-2.34%

Multi-Fund Custodians League Table – Global Funds

Convergence - 2023 League	Tables -	Multi <u>Cu</u>	sto <u>dians</u>	Ma <u>rket Seg</u> i	me <u>nt - Fu</u>	nd <u>Relatio</u>	nships			
Multi		Mar -22		22-23	Market		23-22	Mar -23	Mar -22	23-22
Custodians	#FR	#FR	Change	Change %	Share-23	Share-22	Change %	Rank	Rank	Change
BANK OF AMERICA	8,147	7,334	813	11.1%	7.9%	8.0%	-1.4%	1	1	0
FIRST REPUBLIC BANK	7,944	3,438	4,506	131.1%	7.7%	3.8%	105.2%	2	6	4
JPMORGAN	7,858	7,083	775	10.9%	7.7%	7.8%	-1.5%	3	2	-1
BANK OF NEW YORK	5,683	5,362	321	6.0%	5.5%	5.9%	-5.9%	4	3	-1
MORGAN STANLEY	5,513	5,019	494	9.8%	5.4%	5.5%	-2.5%	5	4	-1
SILICON VALLEY BANK	5,095	7,083	-1,988	-28.1%	5.0%	7.8%	-36.1%	6	2	-4
GOLDMAN SACHS BANK USA	5,073	4,760	313	6.6%	4.9%	5.2%	-5.4%	7	5	-2
CITIBANK	3,711	3,388	323	9.5%	3.6%	3.7%	-2.7%	8	7	-1
WELLS FARGO	2,946	2,962	-16	-0.5%	2.9%	3.3%	-11.7%	9	8	-1
NORTHERN TRUST	2,772	2,535	237	9.3%	2.7%	2.8%	-2.9%	10	9	-1
STATE STREET IFS	2,019	1,952	67	3.4%	2.0%	2.1%	-8.1%	11	10	-1
US BANCORP	1,988	1,777	211	11.9%	1.9%	2.0%	-0.7%	12	12	0
UNION BANK OF SWITZERLAND	1,957	1,942	15	0.8%	1.9%	2.1%	-10.5%	13	11	-2
BNP PARIBAS	1,394	1,280	114	8.9%	1.4%	1.4%	-3.3%	14	15	1
DEUTSCHE BANK	1,390	1,495	-105	-7.0%	1.4%	1.6%	-17.4%	15	14	-1
BARCLAYS	1,343	1,260	83	6.6%	1.3%	1.4%	-5.3%	16	16	0
FIDELITY	1,281	1,157	124	10.7%	1.2%	1.3%	-1.7%	17	17	0
CREDIT SUISSE	1,231	1,642	-411	-25.0%	1.2%	1.8%	-33.4%	18	13	-5
ESHARES	1,172	901	271	30.1%	1.1%	1.0%	15.5%	19	19	0
HSBC FINANCIAL SERVICES	1,162	1,056	106	10.0%	1.1%	1.2%	-2.3%	20	18	-2
RAYMOND JAMES ASSOCIATES	1,046	865	181	20.9%	1.0%	0.9%	7.4%	21	21	0
CITCO FUNDS SERVICES	795	895	-100	-11.2%	0.8%	1.0%	-21.1%	22	20	-2
SOCIETE GENERALE	772	662	110	16.6%	0.8%	0.7%	3.6%	23	23	0
INTERACTIVE BROKERS	761	710	51	7.2%	0.7%	0.8%	-4.8%	24	22	-2
CANADIAN IMPERIAL BANK OF COMMERCE	743	521	222	42.6%	0.7%	0.6%	26.6%	25	25	0
TOP 25 MULTI CUSTODIANS FR	73,796	67,079	6,717	10.0%	71.9%	73.6%	-2.3%			
ALL OTHER	28,814	24,042	4,772	19.8%	28.1%	26.4%	6.4%			
TOTAL MULTI CUSTODIANS FR	102,610	91,121	11,489	12.6%	32.3%	32.3%	0.0%			
NOT REPORTED	34,073	31,126	2,947	9.5%	10.7%	11.0%	-2.8%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	58,362	42,965	15,397	35.8%	18.4%	15.2%	20.6%			
TOTAL FUNDS NOT DISCLOSING A CUSTODIANS FR	92,435	74,091	18,344	24.8%	29.1%	26.3%	10.8%			
TOTAL FUNDS WITH SINGLE CUSTODIANS FR	122,401	116,610	5,791	5.0%	38.6%	41.4%	-6.8%			
TOTAL FUNDS	317,446	281,822	35,624	12.6%	100.0%	100.0%	0.0%			

- Custodians ranked >25 registered the highest growth in funds
 - Funds increased 19.85%, or 1.57x the market
 - Market share increased from 26.38% to 28.08%
 - ➤ An increase of 6.43%
- Custodians ranked 11-25 registered the smallest growth in funds
 - \circ Funds increased 5.18%, or 0.41x the market
 - Market share decreased from 19.88% to 18.57%
 - \blacktriangleright A decrease of 6.59%

Peer (Froup Perfo	ormance 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	12.64%		100%	100%		
Market Growth Multi Custodians Disclosed	12.61%	1.00	32.32%	32.33%	-0.01%	-0.03%
Custodians Ranked 1-10	11.80%	0.94	53.35%	53.74%	-0.39%	-0.72%
Custodians Ranked 11-25	5.18%	0.41	18.57%	19.88%	-1.31%	-6.59%
All Other Custodians	19.85%	1.57	28.08%	26.38%	1.70%	6.43%
Market Growth Single Custodians Disclosed	4.97%	0.39	38.56%	41.38%	-2.82%	-6.81%
Market Growth Custodians Not Disclosed	24.76%	1.96	29.12%	26.29%	2.83%	10.76%

Multi-Fund Custodians League Table – Global AUC

Convergence - Mar 202	9			9		,				
Multi	Mar -23	Mar -22	22-23	22-23		Market	23-22		Mar -22	23-22
Custodians	FR-AUC	FR-AUC	Change	8			Change %	Rank	Rank	Change
BANK OF AMERICA	\$6,544.27	\$6,421.65	\$122.62	1.9%	7.8%	8.1%	-4.5%	1	1	0
JPMORGAN	\$6,454.83	\$6,378.90	\$75.92	1.2%	7.7%	8.1%	-5.2%	2	6	4
BANK OF NEW YORK	\$5,664.92	\$5,971.71	-\$306.79	-5.1%	6.7%	7.6%	-11.1%	3	2	-1
MORGAN STANLEY	\$4,654.85	\$4,407.63	\$247.21	5.6%	5.5%	5.6%	-1.0%	4	3	-1
CITIBANK	\$4,490.26	\$4,073.29	\$416.97	10.2%	5.3%	5.2%	3.3%	5	4	-1
GOLDMAN SACHS BANK USA	\$4,369.96	\$4,218.79	\$151.16	3.6%	5.2%	5.4%	-2.9%	6	2	-4
BARCLAYS	\$3,595.16	\$3,972.50	-\$377.34	-9.5%	4.3%	5.0%	-15.2%	7	5	-2
STATE STREET IFS	\$3,107.25	\$2,853.96	\$253.29	8.9%	3.7%	3.6%	2.0%	8	7	-1
UNION BANK OF SWITZERLAND	\$3,105.92	\$2,987.47	\$118.45	4.0%	3.7%	3.8%	-2.6%	9	8	-1
BNP PARIBAS	\$2,494.31	\$2,153.39	\$340.92	15.8%	3.0%	2.7%	8.5%	10	9	-1
NORTHERN TRUST	\$2,448.00	\$2,549.42	-\$101.42	-4.0%	2.9%	3.2%	-10.0%	11	10	-1
WELLS FARGO	\$2,399.57	\$2,324.90	\$74.67	3.2%	2.9%	2.9%	-3.3%	12	12	0
DEUTSCHE BANK	\$2,191.49	\$2,179.37	\$12.12	0.6%	2.6%	2.8%	-5.8%	13	11	-2
CREDIT SUISSE	\$2,155.99	\$2,815.32	-\$659.33	-23.4%	2.6%	3.6%	-28.2%	14	15	1
HSBC FINANCIAL SERVICES	\$1,666.69	\$1,550.82	\$115.87	7.5%	2.0%	2.0%	0.7%	15	14	-1
SILICON VALLEY BANK	\$1,662.38	\$1,426.39	\$235.99	16.5%	2.0%	1.8%	9.2%	16	16	0
SOCIETE GENERALE	\$1,491.46	\$1,236.72	\$254.73	20.6%	1.8%	1.6%	13.0%	17	17	0
FIRST REPUBLIC BANK	\$1,460.19	\$1,082.63	\$377.56	34.9%	1.7%	1.4%	26.4%	18	13	-5
STANDARD CHARTERED BANK	\$1,453.11	\$1,362.11	\$91.00	6.7%	1.7%	1.7%	0.0%	19	19	0
FIDELITY	\$1,053.31	\$1,053.71	-\$0.40	0.0%	1.3%	1.3%	-6.3%	20	18	-2
BANK OF NOVA SCOTIA	\$904.95	\$806.87	\$98.08	12.2%	1.1%	1.0%	5.1%	21	21	0
US BANCORP	\$890.71	\$796.02	\$94.69	11.9%	1.1%	1.0%	4.9%	22	20	-2
COMPUTERSHARE	\$733.98	\$601.36	\$132.61	22.1%	0.9%	0.8%	14.4%	23	23	0
NOMURA BANK LUXEMBOURG SA	\$698.08	\$690.87	\$7.22	1.0%	0.8%	0.9%	-5.3%	24	22	-2
ROYAL BANK OF CANADA	\$629.62	\$612.16	\$17.46	2.9%	0.7%	0.8%	-3.6%	25	25	0
TOP 25 MULTI CUSTODIANS FR ASSETS	\$66,321.25	\$64,527.96	\$1,793.28	2.8%	78.8%	81.9%	-3.7%			
ALL OTHER	\$17,798.22	\$14,299.99	\$3,498.22	24.5%	21.2%	18.1%	16.6%			
TOTAL MULTI CUSTODIANS FR ASSETS	\$84,119.46	\$78,827.96	\$5,291.50	6.7%	57.8%	55.3%	4.7%			
NOT REPORTED	\$4,577.70	\$4,698.27	-\$120.57	-2.6%	3.1%	3.3%	-4.4%			
ELIGIBLE FUNDS - NOT ATTRIBUTED	\$3,194.19	\$3,106.41	\$87.77	2.8%	2.2%	2.2%	0.8%			
TOTAL ASSETS NOT DISCLOSING A CUSTODIANS FR	\$7,771.89	\$7,804.68	-\$32.80	-0.4%	5.3%	5.5%	-2.3%			
TOTAL ASSETS WITH SINGLE CUSTODIANS FR	\$53,566.23	\$56,020.25	-\$2,454.02	-4.4%	36.8%	39.3%	-6.2%			
TOTAL FUND ASSETS	\$145,457.57	\$142,652.90	\$2,804.68	2.0%	100.0%	100.0%	0.0%			

Custodians Peer Groups – Global Multi AUC Growth & Market Share

- Custodians ranked >25 registered the highest AUC growth
 - AUC increased 24.46%, or 3.64x the market
 - Market share increased from 18.14% to 21.16%
 - ➤ An increase of 16.63%
- Custodians ranked 1-10 registered the lowest AUC growth
 - AUC increased 2.40%, or 0.36x the market
 - Market share decreased from 55.11% to 52.88%
 - \blacktriangleright A decrease of 4.04%

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	1.97%		100%	100%		
Market Growth Multi Custodians Disclosed	6.71%	3.41	57.83%	55.26%	2.57%	4.66%
Custodians Ranked 1-10	2.40%	0.36	52.88%	55.11%	-2.23%	-4.04%
Custodians Ranked 11-25	3.56%	0.53	25.96%	26.75%	-0.79%	-2.95%
All Other Custodians	24.46%	3.64	21.16%	18.14%	3.02%	16.63%
Market Growth Single Custodians Disclosed	-4.38%	-2.23	36.83%	39.27%	-2.44%	-6.22%
Market Growth Custodians Not Disclosed	-0.42%	-0.21	5.34%	5.47%	-0.13%	-2.34%

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.

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.

• Single/Multiple Relationship

• 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

• 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

• 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)

- 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





Career History

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

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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David Etzbach, Managing Director, Custodians and Allocators

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 detzbach@convergenceinc.com



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

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Carl Versella, Managing Director – Capital Markets

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

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