

Asset Services Sigma- Agent Performance Report

September 2019 Data



Executive Summary

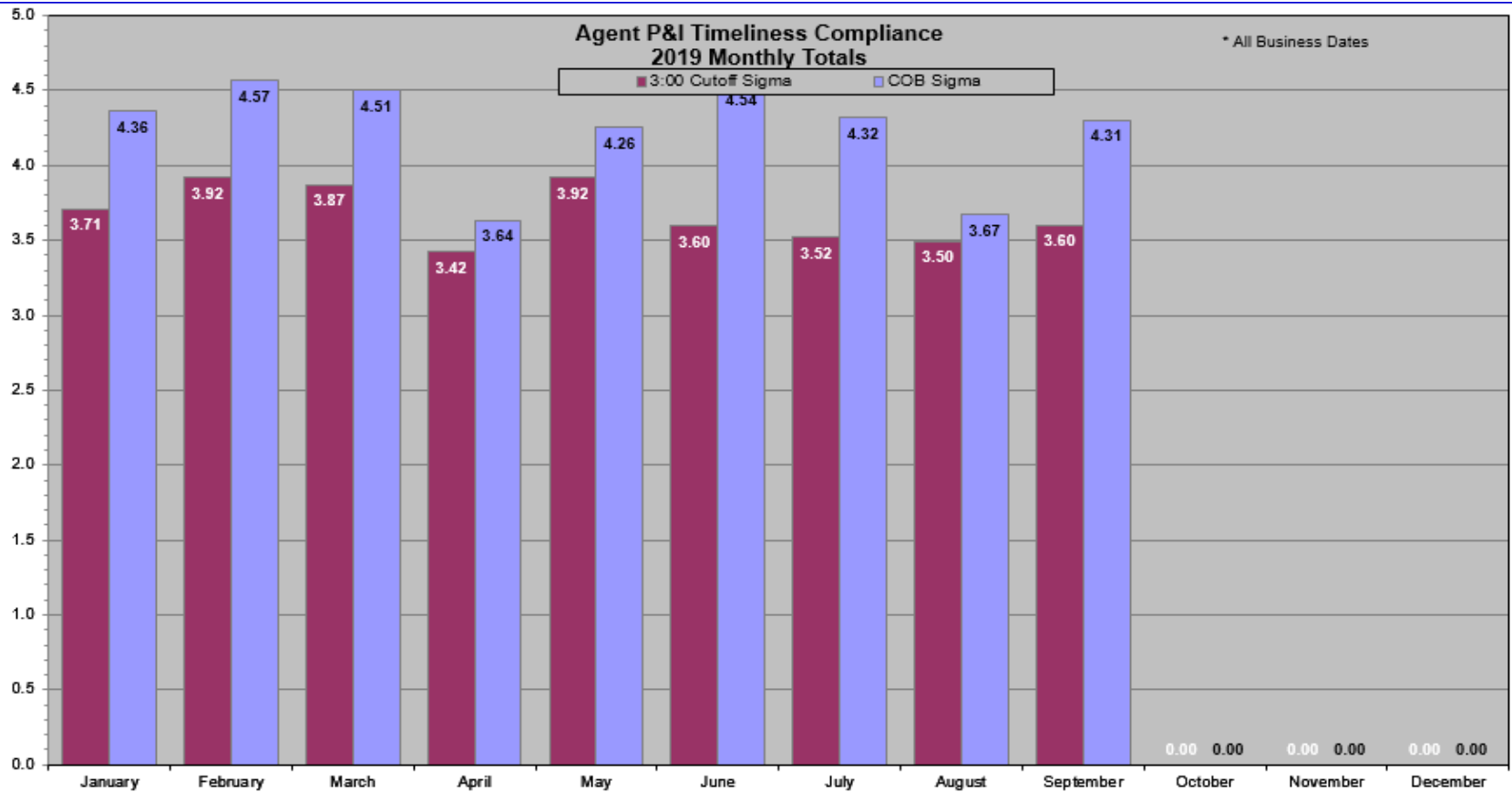
This report highlights the September 2019 performance of the top agents vs. industry targets. This report focuses on the following metrics:

Principal and Interest payment timeliness compliance - percentage of funds received from agents at cut-off (3:00pm ET) and at close of business (6:00pm ET), relative to the total dollars paid for the month. The Agent sigma performance for September 2019 was 3.60σ 98.23%. This month's performance is below the target of 3.67σ (98.50)%.

Principal and Interest allocations on payable date - percentage of allocated dollars and CUSIPS, relative to the total expected dollars and CUSIPs allocated. The Agent sigma performance for September 2019 was 4.32σ 99.76%%. This month's performance is above the target of 3.83σ (99.00%).

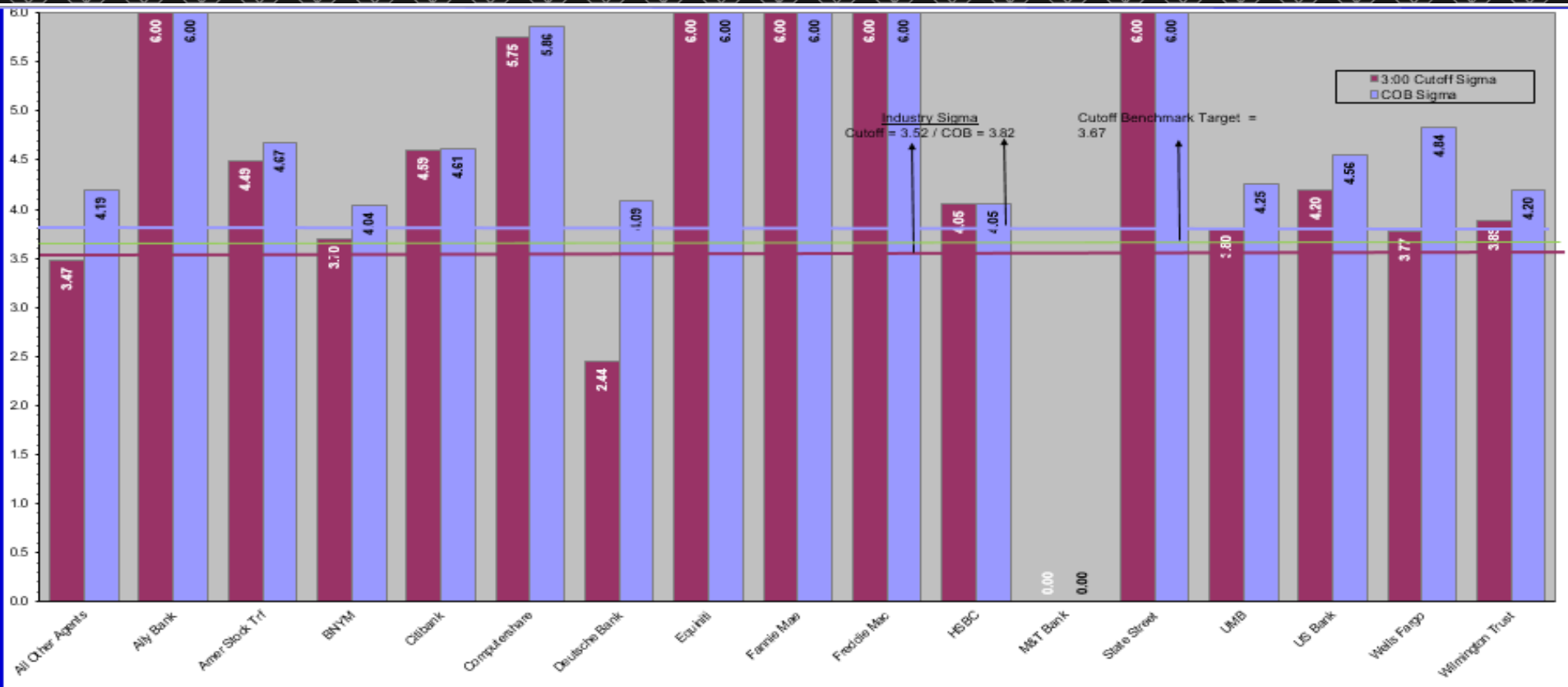
Please visit DTCC's web-site <http://dtcc.com/asset-services/asset-services-performance-metrics.aspx> for more detailed metric definitions and agent trend charts.

P&I Allocations Monthly Trend



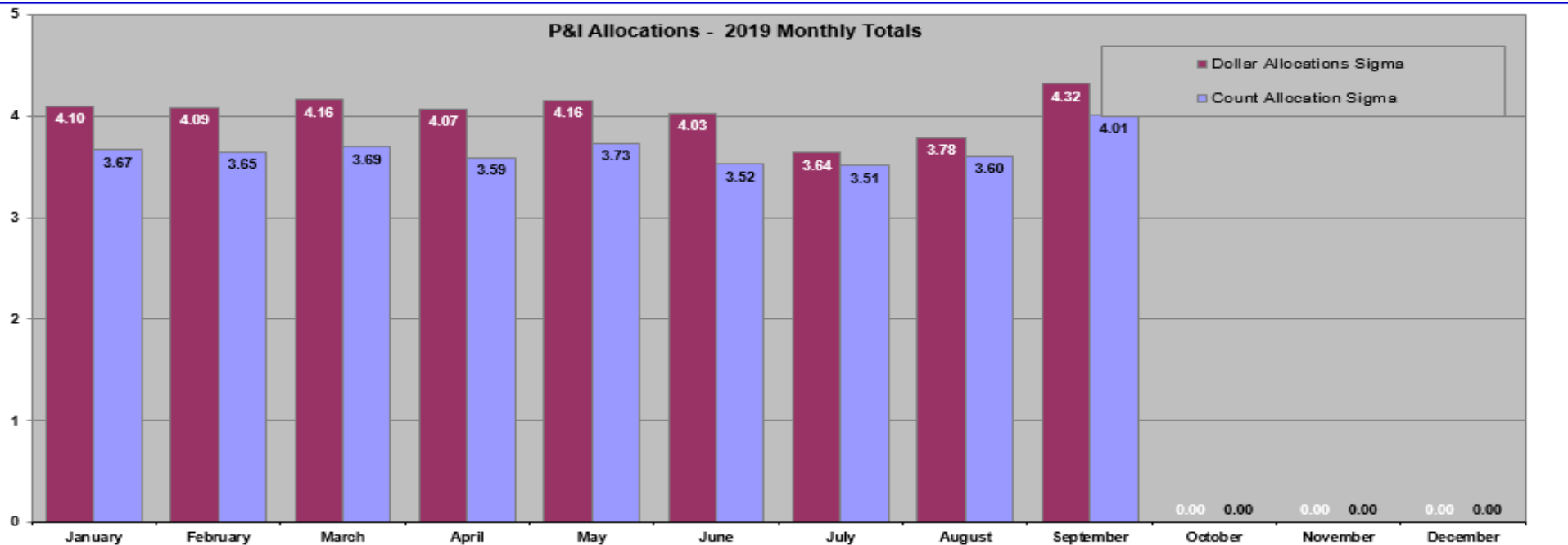
	January	February	March	April	May	June	July	August	September	October	November	December	YTD
Percent by 3:00 Cut-off	98.65%	99.23%	99.12%	97.27%	99.22%	98.19%	97.84%	97.71%	98.23%				98.37%
Cutoff Sigma	3.71	3.92	3.87	3.42	3.92	3.60	3.52	3.50	3.60				3.64
Percent by COB	99.79%	99.89%	99.87%	98.37%	99.71%	99.88%	99.76%	98.52%	99.75%				99.52%
COB Sigma	4.36	4.57	4.51	3.64	4.26	4.54	4.32	3.67	4.31				4.09

P&I Timeliness Compliance – Agent Performance



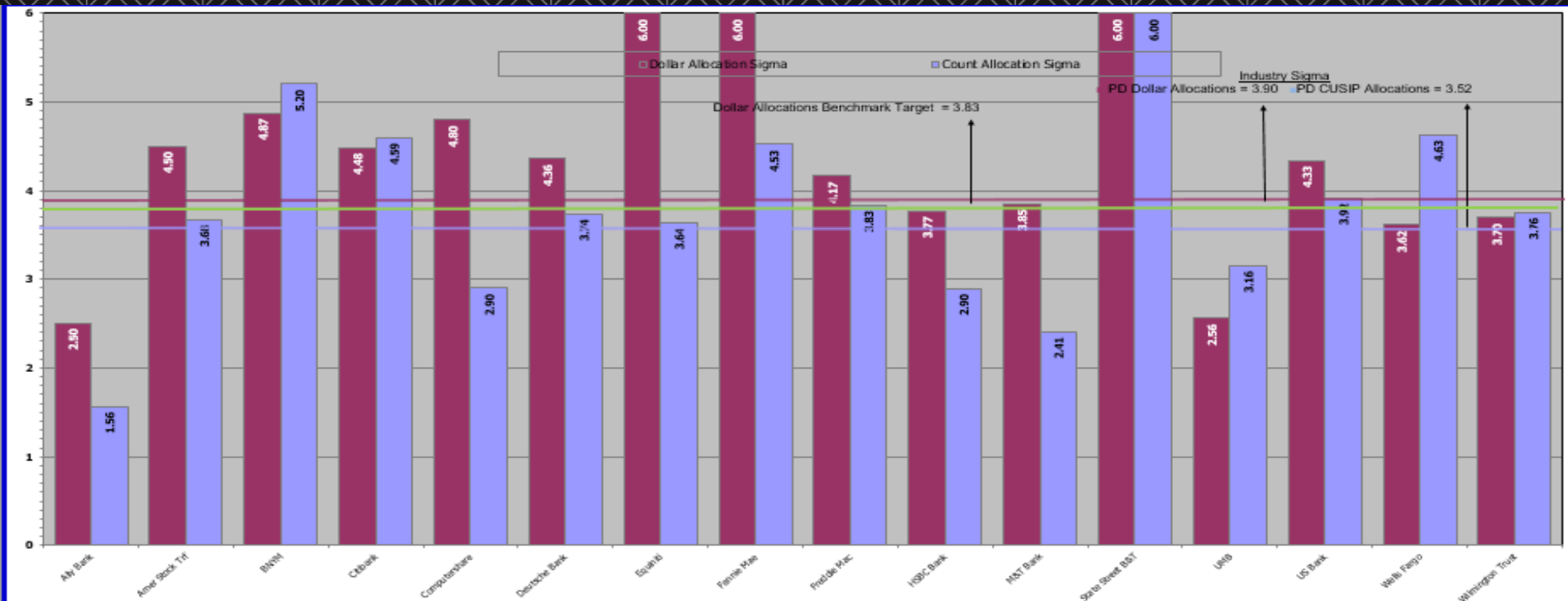
	All Other Agents	Ally Bank	Amer Stock Trf	BNYM	Citibank	Computer share	Deutsche Bank	Equiniti	Fannie Mae	Freddie Mac	HSBC	M&T Bank	State Street	US Bank	Wells Fargo	Wilmington Trust
% of Total Allocations	14.12%	0.12%	1.32%	26.55%	6.89%	20.82%	5.37%	3.70%	0.08%	0.92%	0.47%	0.00%	1.87%	10.14%	6.02%	1.43%
Percent by 3:00 Cut-off	97.57%	100.00%	99.86%	98.61%	99.90%	100.00%	82.74%	100.00%	100.00%	100.00%	99.46%	0.00%	100.00%	99.65%	98.83%	99.15%
Cutoff Sigma	3.47	6.00	4.49	3.70	4.59	5.75	2.44	6.00	6.00	6.00	4.05	0.00	6.00	4.20	3.77	3.89
Variance from Industry Cutoff	-0.13	2.40	0.88	0.10	0.99	2.15	-1.16	2.40	2.40	2.40	0.45	-3.60	2.40	0.59	0.16	0.29
Percent by COB	99.64%	100.00%	99.92%	99.45%	99.91%	100.00%	99.52%	100.00%	100.00%	100.00%	99.46%	0.00%	100.00%	99.89%	99.96%	99.65%
COB Sigma	4.19	6.00	4.67	4.04	4.61	5.86	4.09	6.00	6.00	6.00	4.05	0.00	6.00	4.56	4.84	4.20

P&I Allocations Monthly Trend



	January	February	March	April	May	June	July	August	September	October	November	December	YTD
Total Expected Allocations (Billions)	\$273.662	\$258.606	\$333.572	\$281.044	\$304.396	\$351.944	\$324.640	\$307.729	\$400.526				\$2836.120
Allocation \$ Percent	99.54%	99.52%	99.61%	99.49%	99.60%	99.42%	98.37%	98.88%	99.76%				99.36%
Allocation \$ Sigma	4.10	4.09	4.16	4.07	4.16	4.03	3.64	3.78	4.32				3.99
Unallocated Impact (Billions \$)	\$1.272	\$1.253	\$1.296	\$1.423	\$1.204	\$2.032	\$5.288	\$3.437	\$0.964				\$18.169
Total CUSIP Expected	273,962	367,084	300,356	268,925	270,102	353,786	287,170	369,275	691,765				3,182,425
CUSIP Allocations %	98.49%	98.41%	98.58%	98.18%	98.72%	97.85%	97.78%	98.22%	99.39%				98.51%
CUSIP Allocations Sigma	3.67	3.65	3.69	3.59	3.73	3.52	3.51	3.60	4.01				3.67
Unallocated Impact (Count)	4,131	5,853	4,255	4,885	3,450	7,594	6,381	6,564	4,222				47,335

P&I Allocations – Agent Performance



AGENT	All Other Agents	Ally Bank	Amer Stock Trf	BNYM	Citibank	Computershare	Deutsche Bank	Equiniti	Fannie Mae	Freddie Mac	HSBC Bank	M&T Bank	State Street B&T	US Bank	Wells Fargo	Wilmington Trust
Total Expected % of Industry	\$58.522 14.60%	\$0.562 0.14%	\$5.358 1.34%	\$105.675 26.36%	\$27.313 6.81%	\$84.305 21.03%	\$21.255 5.30%	\$14.960 3.73%	\$0.331 0.08%	\$3.727 0.93%	\$1.211 0.30%	\$0.004 0.00%	\$7.571 1.89%	\$40.300 10.05%	\$23.667 5.90%	\$5.514 1.38%
Allocation \$ Percent	99.43%	84.16%	99.87%	99.96%	99.86%	99.95%	99.79%	100.00%	100.00%	99.62%	98.85%	99.06%	100.00%	99.77%	98.28%	98.60%
Allocation \$ Sigma	4.03	2.50	4.50	4.87	4.48	4.80	4.36	6.00	6.00	4.17	3.77	3.85	6.00	4.33	3.62	3.70
Variance from Industry \$ Sigma	-0.20	-1.73	0.27	0.64	0.25	0.57	0.14	1.77	1.77	-0.06	-0.45	-0.38	1.77	0.11	-0.61	-0.53
CUSIP Allocations %	97.20%	52.38%	98.52%	99.99%	99.90%	91.97%	98.75%	98.39%	99.88%	99.02%	91.90%	81.82%	100.00%	99.22%	99.91%	98.80%
CUSIP Allocations Sigma	3.41	1.56	3.68	5.20	4.59	2.90	3.74	3.64	4.53	3.83	2.90	2.41	6.00	3.92	4.63	3.76
Variance from Industry CUSIP Sigma	-0.58	-2.43	-0.31	1.21	0.60	-1.09	-0.25	-0.35	0.54	-0.16	-1.09	-1.58	2.01	-0.07	0.64	-0.23