

Asset Services Sigma- Agent Performance Report

September 2018 Data



Executive Summary

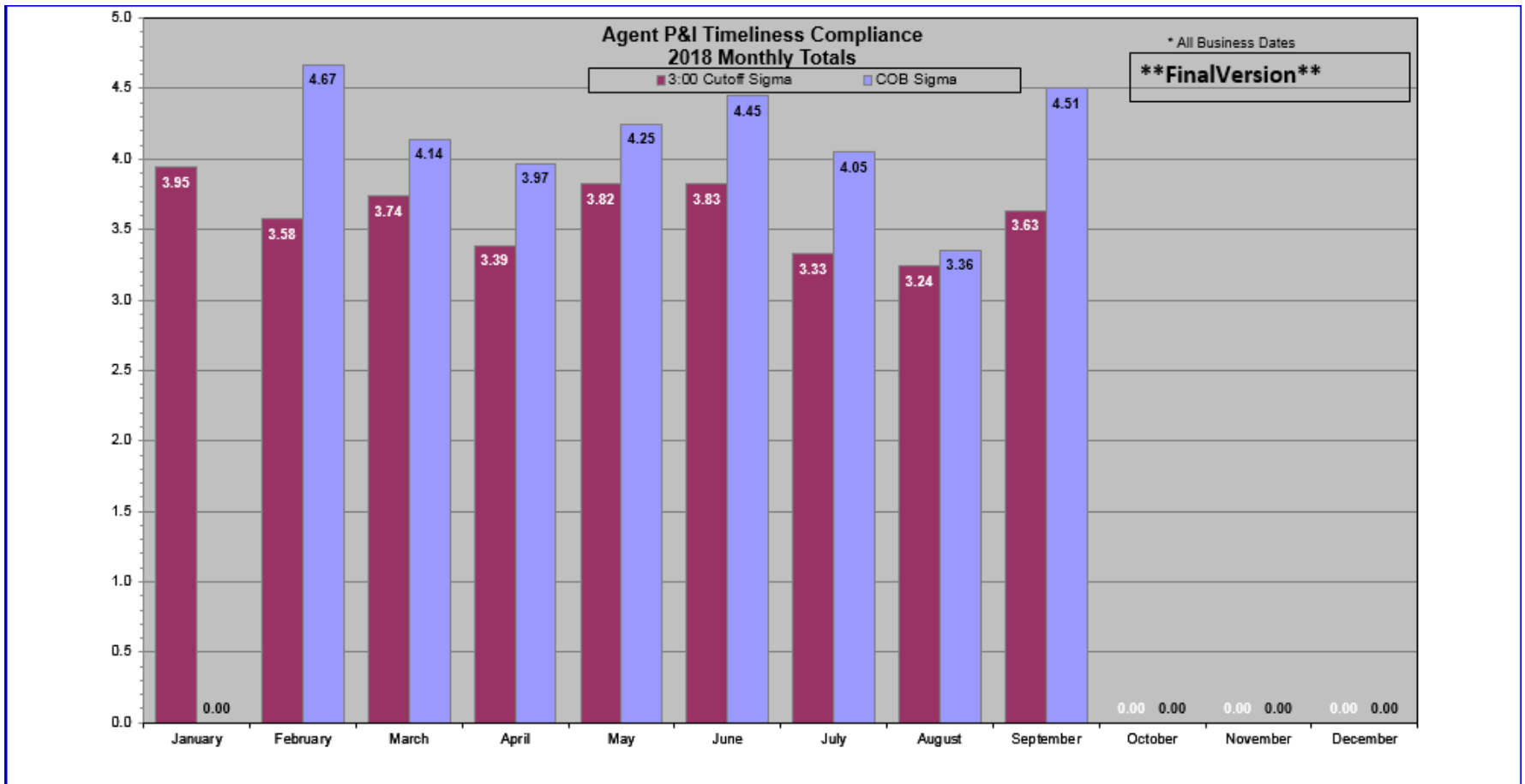
This report highlights the September 2018 performance of the top agents vs. industry targets. This report focuses on the following metrics:

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 2018 was 3.63σ 98.36%. 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 2018 was 4.51σ 99.87%. This month's performance is above the target of 3.83σ (99.00%).

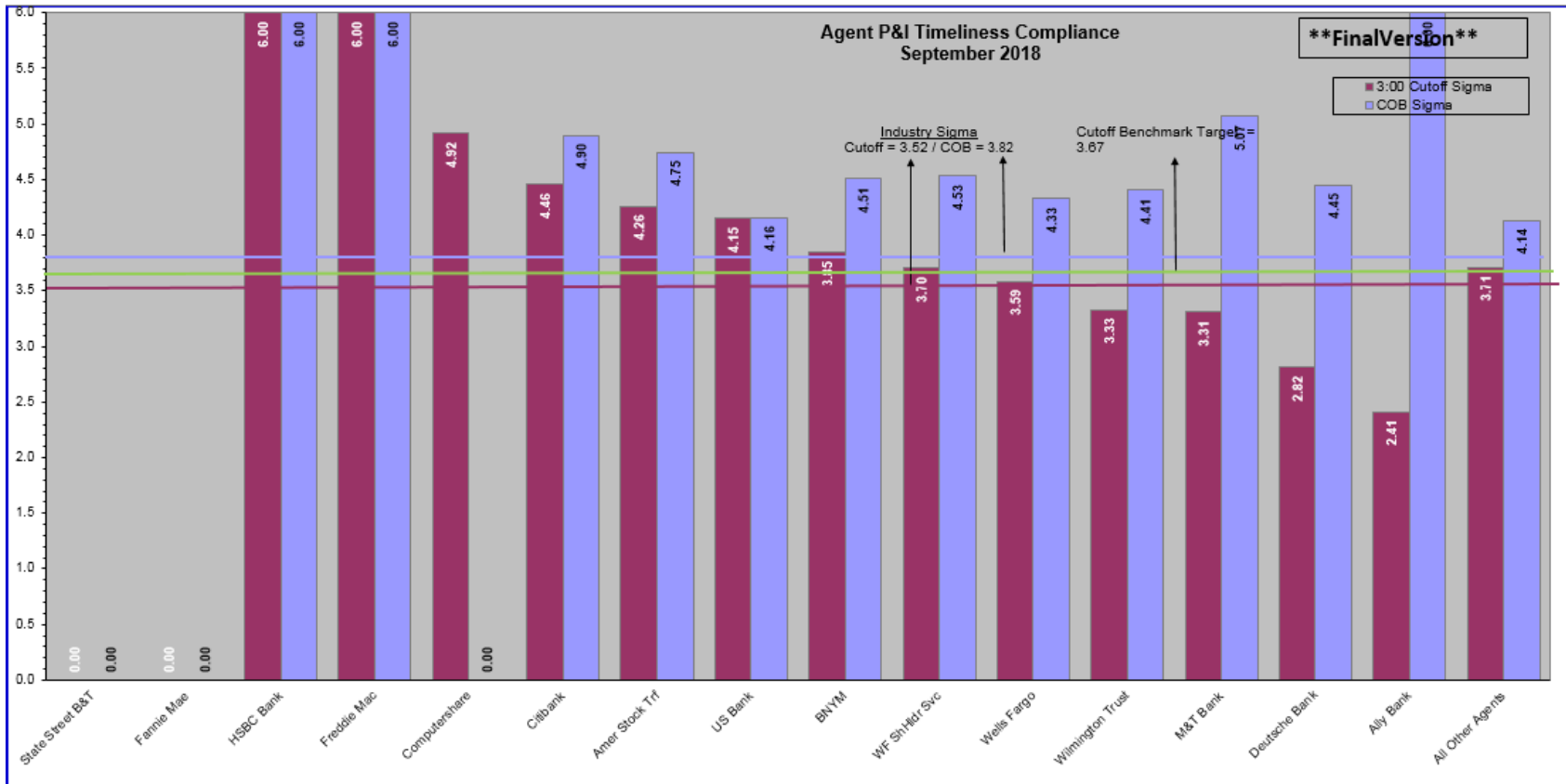
Please visit DTCC's web-site <http://dtcc.com/asset-services/asset-services-performance-metrics.aspx> for more detailed metric definitions and agent trend charts.

P&I Allocations Monthly Trend



	January	February	March	April	May	June	July	August	September	October	November	December	YTD
Percent by 3:00 Cut-off	99.28%	98.12%	98.73%	97.05%	98.99%	99.00%	96.63%	95.90%	98.36%				98.01%
Cutoff Sigma	3.95	3.58	3.74	3.39	3.82	3.83	3.33	3.24	3.63				3.56
Percent by COB	100.00%	99.92%	99.59%	99.32%	99.70%	99.84%	99.46%	96.82%	99.87%				99.54%
COB Sigma	6.00	4.67	4.14	3.97	4.25	4.45	4.05	3.36	4.51				4.10

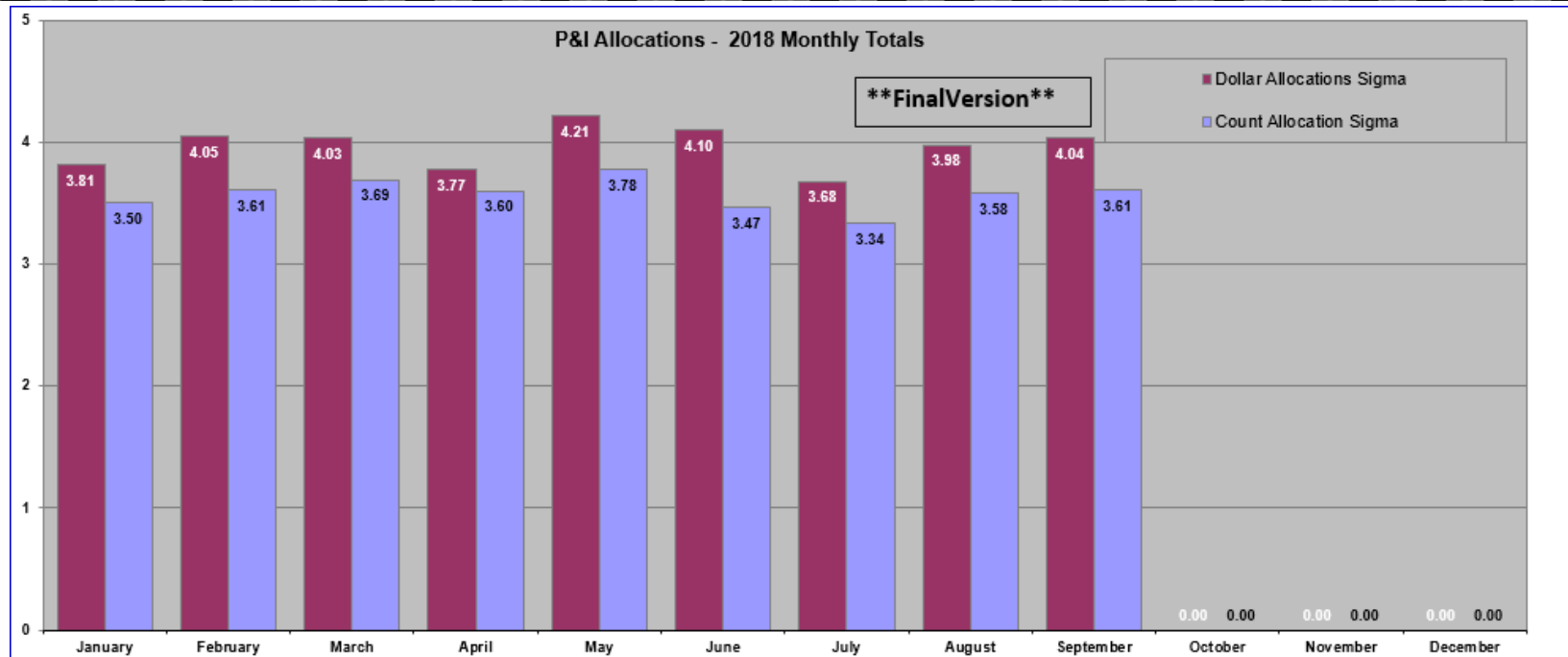
P&I Timeliness Compliance – Agent Performance



	State Street B&T	Fannie Mae	HSBC Bank	Freddie Mac	Computer share	Citibank	Amer Stock Trf	US Bank	BNYM	WF ShHldr Svc	Wells Fargo	Wilmington Trust	M&T Bank	Deutsche Bank	Allly Bank	All Other Agents
% of Total Allocations	0.00%	0.00%	1.38%	0.14%	20.43%	6.52%	3.34%	1.35%	26.20%	6.42%	7.08%	2.18%	0.38%	7.44%	0.43%	16.71%
Percent by 3:00 Cutoff	100.00%	100.00%	100.00%	100.00%	99.97%	99.85%	99.71%	99.60%	99.06%	98.62%	98.15%	96.63%	96.49%	90.62%	81.89%	98.65%
Cutoff Sigma	6.00	6.00	6.00	6.00	4.92	4.46	4.26	4.15	3.85	3.70	3.59	3.33	3.31	2.82	2.41	3.71
Variance from Industry Cutoff	2.35	2.35	2.35	2.35	1.27	0.81	0.61	0.51	0.20	0.06	-0.06	-0.32	-0.34	-0.83	-1.24	0.06
Percent by COB	100.00%	100.00%	100.00%	100.00%	100.00%	99.97%	99.94%	99.61%	99.87%	99.88%	99.77%	99.82%	99.98%	99.84%	100.00%	99.58%
COB Sigma	6.00	6.00	6.00	6.00	6.00	4.90	4.75	4.16	4.51	4.53	4.33	4.41	5.07	4.45	6.00	4.14

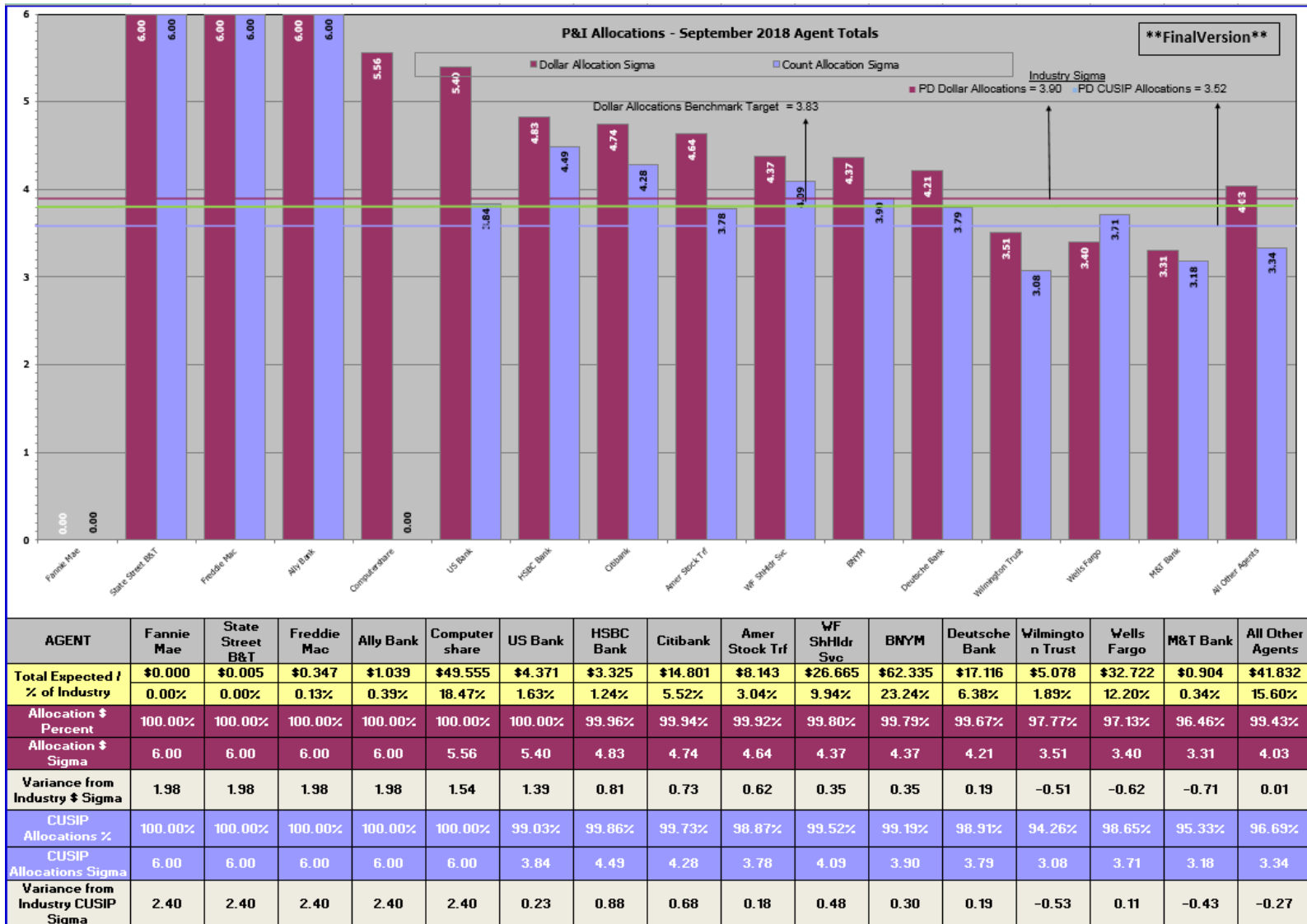
*Please note WF ShHldr Svc is now Equiniti

P&I Allocations Monthly Trend



	January	February	March	April	May	June	July	August	September	October	November	December	YTD
Total Expected Allocations (Billions)	\$299.863	\$252.145	\$316.239	\$319.280	\$317.623	\$345.987	\$339.043	\$283.316	\$281.804				\$2755.299
Allocation \$ Percent	98.96%	99.47%	99.43%	98.85%	99.67%	99.54%	98.53%	99.34%	99.44%				99.24%
Allocation \$ Sigma	3.81	4.05	4.03	3.77	4.21	4.10	3.68	3.98	4.04				3.93
Unallocated Impact (Billions \$)	\$3.109	\$1.344	\$1.787	\$3.659	\$1.054	\$1.597	\$4.972	\$1.879	\$1.581				\$20.983
Total CUSIP Expected	282,008	370,197	305,259	267,999	270,969	360,167	285,997	368,653	302,407				2,813,656
CUSIP Allocations %	97.75%	98.27%	98.59%	98.22%	98.85%	97.53%	96.70%	98.13%	98.24%				98.03%
CUSIP Allocations Sigma	3.50	3.61	3.69	3.60	3.78	3.47	3.34	3.58	3.61				3.56
Unallocated Impact (Count)	6,344	6,422	4,313	4,767	3,103	8,887	9,428	6,903	5,335				55,502

P&I Allocations – Agent Performance



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