

Asset Services Sigma- Agent Performance Report

February 2019 Data



Executive Summary

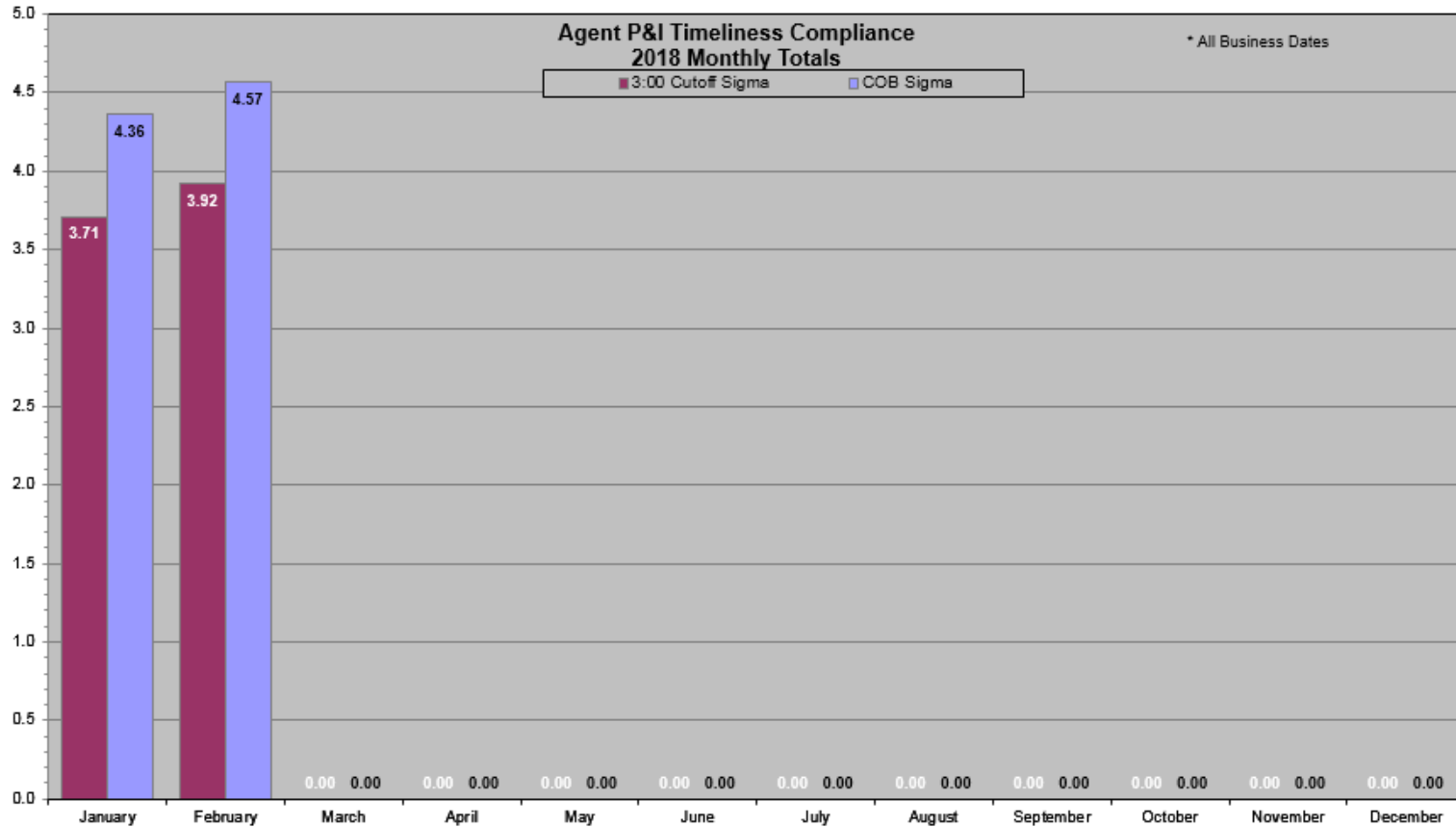
This report highlights the February 2019 performance of the top agents vs. industry targets. This report focuses on the following metrics:

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 February 2019 was 3.92σ (99.23%). This month's performance is above 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 February 2019 was 4.09σ (99.52%). This month's performance is above the target of 3.83σ (99.00%).

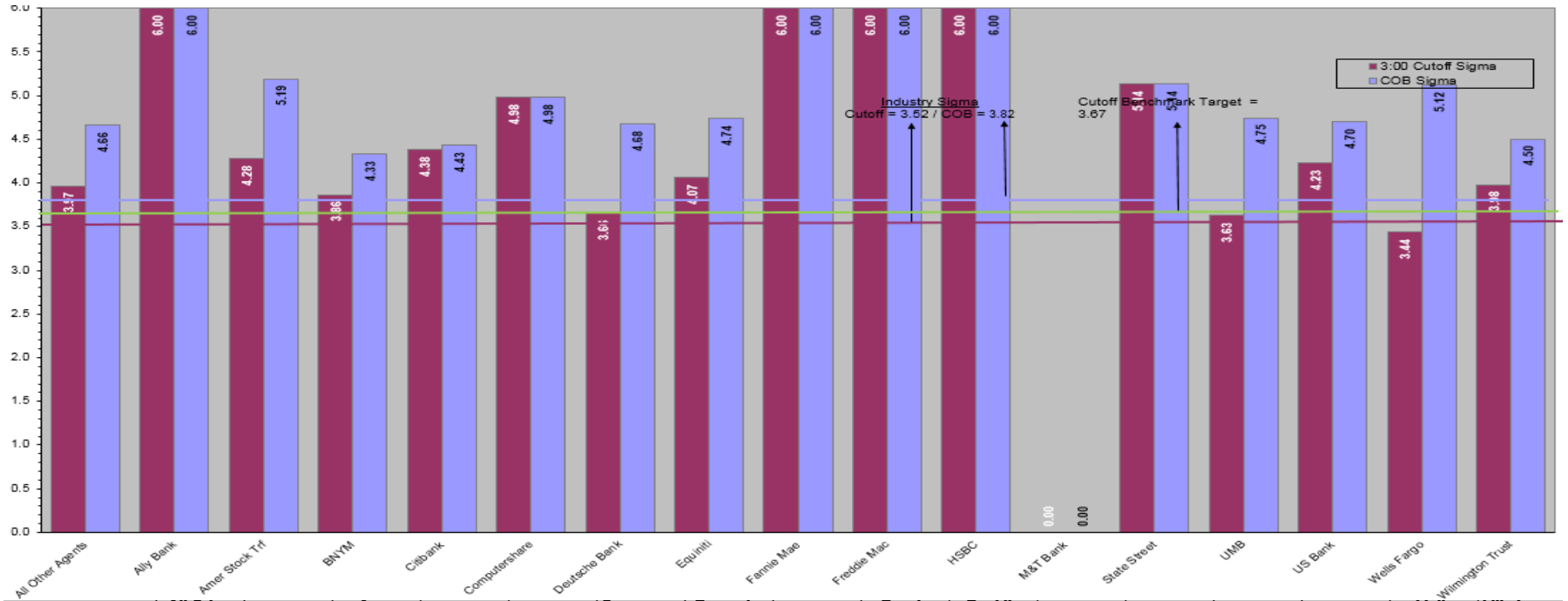
Please visit DTCC's web-site <http://dtcc.com/asset-services/asset-services-performance-metrics.aspx> for more detailed metric definitions and agent trend charts.

P&I Allocations Monthly Trend



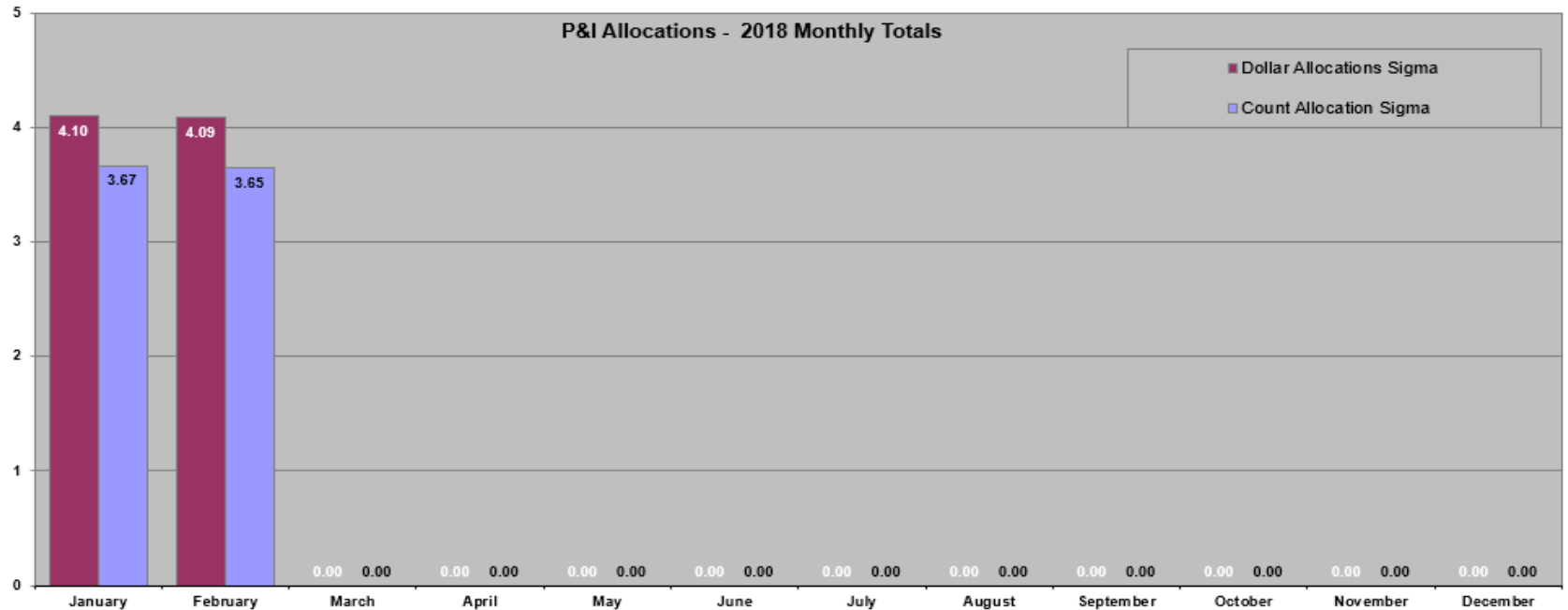
	January	February	March	April	May	June	July	August	September	October	November	December	YTD
Percent by 3:00 Cut-off	98.65%	99.23%											98.93%
Cutoff Sigma	3.71	3.92											3.80
Percent by COB	99.79%	99.89%											99.84%
COB Sigma	4.36	4.57											4.45

P&I Timeliness Compliance – Agent Performance



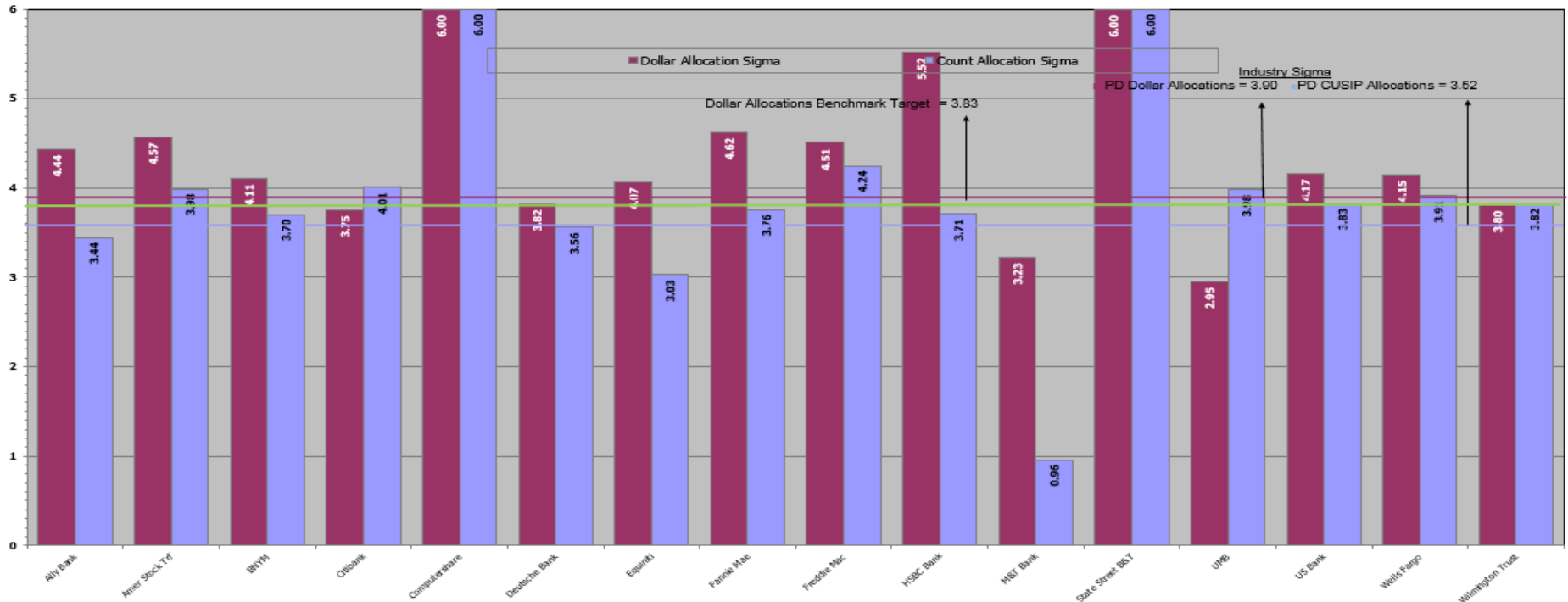
	All Other Agents	Ally Bank	Amer Stock Trf	BNYM	Citibank	Computershare	Deutsche Bank	Equiniti	Fannie Mae	Freddie Mac	HSBC	M&T Bank	State Street	US Bank	Wells Fargo	Wilmington Trust
% of Total Allocations	16.21%	0.14%	2.47%	26.79%	4.50%	10.20%	6.19%	2.49%	0.12%	1.04%	2.38%	0.00%	0.69%	16.30%	8.44%	1.87%
Percent by 3:00 Cutoff	99.32%	100.00%	99.73%	99.10%	99.80%	99.98%	98.45%	99.49%	100.00%	100.00%	100.00%	#DIV/0!	99.99%	99.69%	97.39%	99.35%
Cutoff Sigma	3.97	6.00	4.28	3.86	4.38	4.98	3.66	4.07	6.00	6.00	6.00	#DIV/0!	5.14	4.23	3.44	3.98
Variance from Industry Cutoff	0.04	2.08	0.36	-0.06	0.45	1.06	-0.27	0.14	2.08	2.08	2.08	#DIV/0!	1.21	0.31	-0.48	0.06
Percent by COB	99.92%	100.00%	99.99%	99.77%	99.83%	99.98%	99.93%	99.94%	100.00%	100.00%	100.00%	#DIV/0!	99.99%	99.93%	99.99%	99.87%
COB Sigma	4.66	6.00	5.19	4.33	4.43	4.98	4.68	4.74	6.00	6.00	6.00	#DIV/0!	5.14	4.70	5.12	4.50

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											\$532.268
Allocation \$ Percent	99.54%	99.52%											99.53%
Allocation \$ Sigma	4.10	4.09											4.09
Unallocated Impact (Billions \$)	\$1.272	\$1.253											\$2.525
Total CUSIP Expected	273,962	367,084											641,046
CUSIP Allocations %	98.43%	98.41%											98.44%
CUSIP Allocations Sigma	3.67	3.65											3.66
Unallocated Impact (Count)	4,131	5,853											9,984

P&I Allocations – Agent Performance



AGENT	All Other Agents	Ally Bank	Amer Stock Trf	BNYM	Citibank	Computer share	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	\$44.820 17.33%	\$0.364 0.14%	\$6.450 2.49%	\$68.852 26.62%	\$11.727 4.53%	\$26.665 10.31%	\$15.719 6.08%	\$6.526 2.52%	\$0.317 0.12%	\$2.727 1.05%	\$4.450 1.72%	\$0.005 0.00%	\$1.592 0.62%	\$41.673 16.11%	\$21.733 8.40%	\$4.707 1.82%
Allocation \$ Percent	99.37%	99.83%	99.89%	99.55%	98.79%	100.00%	98.99%	99.49%	99.91%	99.87%	100.00%	95.78%	100.00%	99.62%	99.60%	98.94%
Allocation \$ Sigma	4.00	4.44	4.57	4.11	3.75	6.00	3.82	4.07	4.62	4.51	5.52	3.23	6.00	4.17	4.15	3.80
Variance from Industry \$ Sigma	-0.09	0.35	0.49	0.03	-0.33	1.91	-0.26	-0.02	0.54	0.42	1.43	-0.86	1.91	0.08	0.07	-0.28
CUSIP Allocations %	97.01%	97.37%	99.35%	98.61%	99.39%	100.00%	98.02%	93.67%	98.80%	99.69%	98.63%	29.41%	100.00%	99.00%	99.21%	98.99%
CUSIP Allocations Sigma	3.38	3.44	3.98	3.70	4.01	6.00	3.56	3.03	3.76	4.24	3.71	0.96	6.00	3.83	3.91	3.82
Variance from Industry CUSIP Sigma	-0.26	-0.21	0.34	0.05	0.36	2.35	-0.09	-0.62	0.11	0.59	0.06	-2.69	2.35	0.18	0.27	0.18

*Please note WF ShHldr Svc is now Equiniti