DTCC

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FINAL

Asset Services Sigma- Agent Performance Report

October 2018 Data

Executive Summary

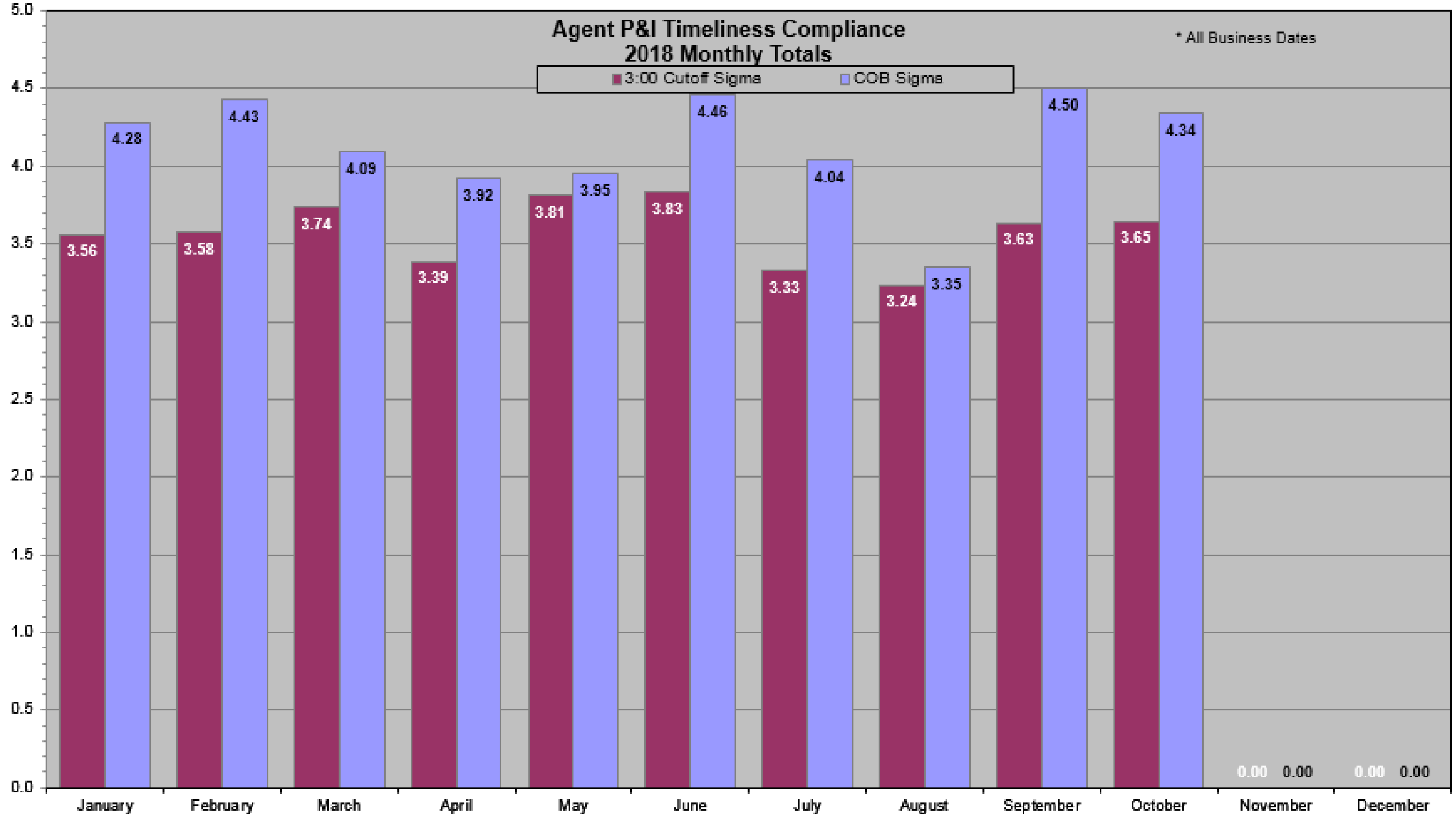
This report highlights the October 2018 performance of the top agents vs. industry targets. This report focuses on the following metrics:

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 October 2018 was 3.65σ (98.40%). 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 October 2018 was 4.34σ (99.78)%. This month's performance is above the target of 3.83σ (99.00%).

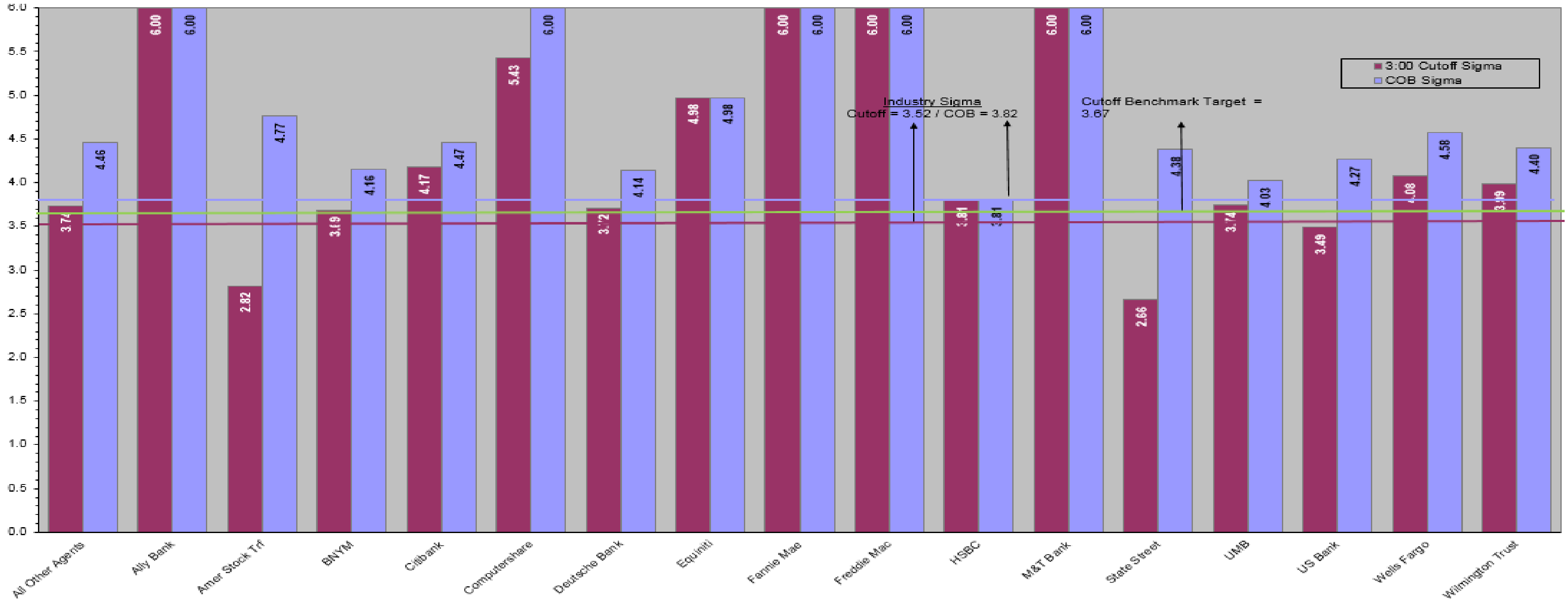
Please visit DTCC's web-site http://dtcc.com/asset-services/asset-services-performance-metrics.aspx for more detailed metric definitions and agent trend charts.

P&I Allocations Monthly Trend



	January	February	March	April	May	June	July	August	September	October	November	December	YTD
Percent by 3:00 Cut-off	98.03%	98.12%	98.73%	97.05%	98.96%	99.01%	96.61%	95.88%	98.36%	98.40%			97.92%
Cutoff Sigma	3.56	3.58	3.74	3.39	3.81	3.83	3.33	3.24	3.63	3.65			3.54
Percent by COB	99.73%	99.83%	99.52%	99.23%	99.29%	99.85%	99.44%	96.76%	99.87%	99.78%			99.34%
COB Sigma	4.28	4.43	4.09	3.92	3.95	4.46	4.04	3.35	4.50	4.34			3.98

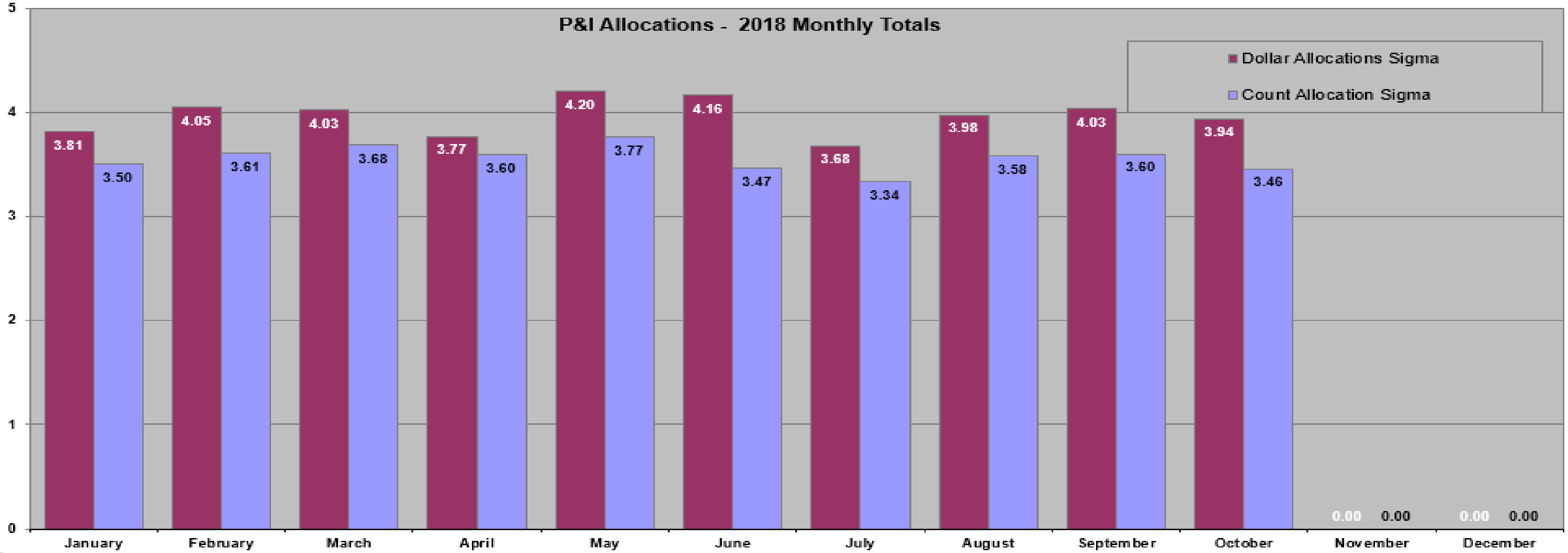
P&I Timeliness Compliance – Agent Performance



	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	15.74%	0.36%	1.70%	24.47%	5.51%	9.08%	5.49%	3.44%	0.11%	1.91%	0.34%	0.00%	2.75%	16.38%	9.11%	3.45%
Percent by 3:00 Cut-off	98.74%	100.00%	90.67%	98.57%	99.63%	100.00%	98.66%	99.97%	100.00%	100.00%	98.96%	100.00%	87.78%	97.66%	99.50%	99.35%
Cutoff Sigma	3.74	6.00	2.82	3.69	4.17	5.43	3.72	4.98	6.00	6.00	3.81	6.00	2.66	3.49	4.08	3.99
Variance from Industry Cutoff	0.09	2.35	-0.82	0.04	0.53	1.78	0.07	1.33	2.35	2.35	0.16	2.35	-0.98	-0.16	0.43	0.34
Percent by COB	99.85%	100.00%	99.95%	99.61%	99.85%	100.00%	99.58%	99.97%	100.00%	100.00%	98.96%	100.00%	99.80%	99.72%	99.90%	99.82%
COB Sigma	4.46	6.00	4.77	4.16	4.47	6.00	4.14	4.98	6.00	6.00	3.81	6.00	4.38	4.27	4.58	4.40

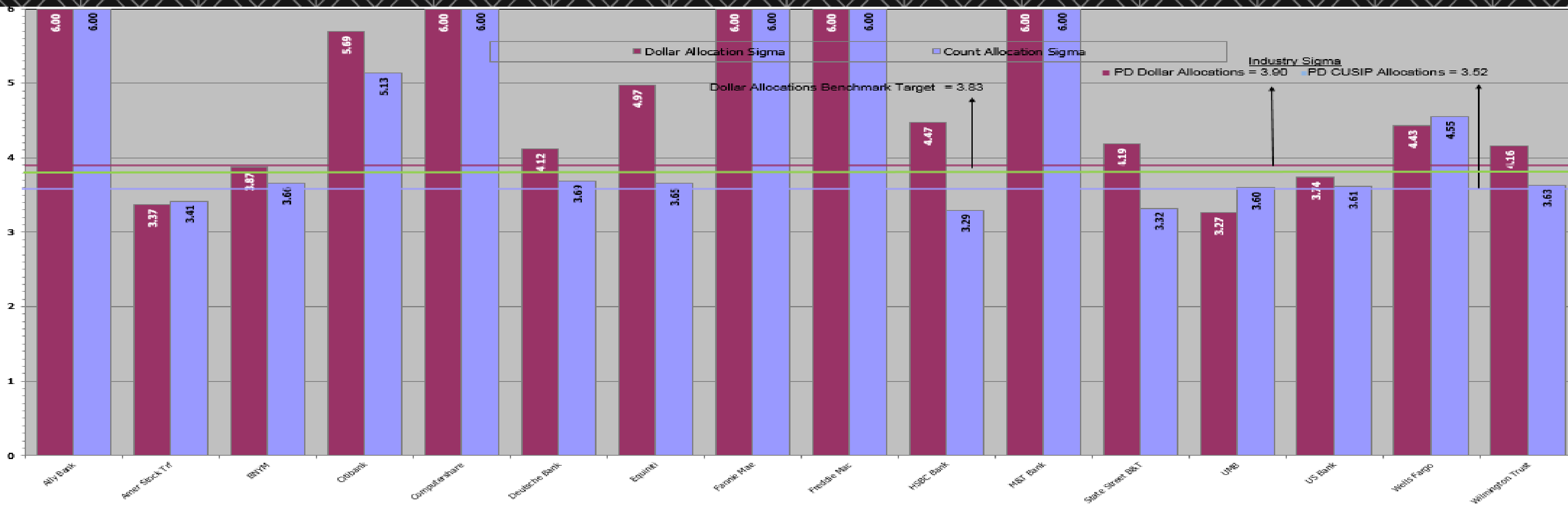
*Please note WF ShHldr Svc is now Equiniti

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	$316.245	$319.295	$317.673	$345.821	$339.043	$283.316	$281.820	$284.067			$3039.287
Allocation $ Percent	98.96%	99.47%	99.42%	98.84%	99.66%	99.61%	98.53%	99.34%	99.43%	99.26%			99.24%
Allocation $ Sigma	3.81	4.05	4.03	3.77	4.20	4.16	3.68	3.98	4.03	3.94			3.93
Unallocated Impact (Billions $)	$3.109	$1.344	$1.826	$3.701	$1.094	$1.334	$4.973	$1.879	$1.596	$2.097			$22.952
Total CUSIP Expected	282,008	370,197	305,287	267,999	270,969	360,173	285,998	368,653	302,406	272,019			3,085,709
CUSIP Allocations %	97.75%	98.27%	98.55%	98.22%	98.84%	97.55%	96.70%	98.12%	98.23%	97.50%			97.97%
CUSIP Allocations Sigma	3.50	3.61	3.68	3.60	3.77	3.47	3.34	3.58	3.60	3.46			3.55
Unallocated Impact (Count)	6,344	6,422	4,416	4,781	3,156	8,817	9,450	6,929	5,362	6,814			62,491

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	$48.790	$1.037	$4.956	$68.815	$14.248	$26.346	$15.580	$10.012	$0.316	$4.069	$0.580	$0.004	$7.997	$45.343	$26.024	$9.711
	17.18%	0.37%	1.74%	24.22%	5.02%	9.27%	5.48%	3.52%	0.11%	1.43%	0.20%	0.00%	2.82%	15.96%	9.16%	3.42%
Allocation $ Percent	98.84%	100.00%	96.95%	99.11%	100.00%	100.00%	99.56%	99.97%	100.00%	100.00%	99.85%	100.00%	99.64%	98.73%	99.83%	99.61%
Allocation $ Sigma	3.77	6.00	3.37	3.87	5.69	6.00	4.12	4.97	6.00	6.00	4.47	6.00	4.19	3.74	4.43	4.16
Variance from Industry $ Sigma	-0.17	2.06	-0.56	-0.07	1.75	2.06	0.18	1.04	2.06	2.06	0.53	2.06	0.25	-0.20	0.49	0.22
CUSIP Allocations %	94.12%	100.00%	97.22%	98.47%	99.99%	100.00%	98.57%	98.44%	100.00%	100.00%	96.35%	100.00%	96.56%	98.26%	99.89%	98.35%
CUSIP Allocations Sigma	3.07	6.00	3.41	3.66	5.13	6.00	3.69	3.65	6.00	6.00	3.29	6.00	3.32	3.61	4.55	3.63
Variance from Industry CUSIP Sigma	-0.39	2.54	-0.04	0.20	1.67	2.54	0.23	0.19	2.54	2.54	-0.17	2.54	-0.14	0.15	1.09	0.17

*Please note WF ShHldr Svc is now Equiniti