Supplementary Material to the main paper:

A General Framework to Compare Announcement Accuracy: Static vs LES-based Announcement

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In this supplement to the main paper, we present additional simulation results in single-class and two-class systems, both with and without time-varying arrival rates. The results that we present here serve as robustness checks which further substantiate our theoretical results from the main paper.

1. Description of the Results

Our simulation results, throughout this paper, are based on 10 independent replications of 2 million arrival events each. Our simulations are steady-state simulations. For this, we exclude from each simulation run the first 5,000 events so as to remove the effect of the initial transient period. We consider several distributions for the service and abandonment times: (i) Exponential (M); (ii) lognormal with mean a and variance b ($LN(a,b)$); (iii) Erlang (sum of two exponentials; E_2); (iv) deterministic (D); and (v) Hyper-exponential with balanced means (mixture of two exponentials; H_2). For our two-class models, we assume non-preemptive priority of the high-class over the low-class, and report results for the low-class. For models with time-varying arrivals, we focus on sinusoidal arrivals, i.e., we consider:

$$\lambda(u) = \bar{\lambda} + \bar{\lambda}\alpha \sin(\gamma u), \text{ for } 0 \leq u < \infty \ , \tag{1.1}$$

where $\bar{\lambda}$ is the average arrival rate and α is the relative amplitude.

For the WA prediction, we consider two alternatives: (i) we use the theoretical asymptotic expression for the correlation depending on the model as given in the main paper, and (ii) we consider a running-average simulation-based estimate for the correlation; the corresponding predictor is denoted "WA-run". We also consider a delay prediction which is equal to an exponentially smoothed average over previous LES delays, where we estimate the value of the smoothing factor in the simulation by using a gradient-descent method to minimize the errors between the smoothed averages and actual delays, in a training set consisting of 100 data points (after steady state is reached). We denote this predictor by "EXP".

In Tables 1-4 we present point estimates of the ASE's and for the correlation between LES announcements and virtual delays of waiting customers in the single-class $M/G/100$ model for alternative service-time distributions. Tables 1-4 show that the WA and WA-run predictors are superior to both LES and EA throughout. We also observe that our theoretical results for the asymptotic form of the correlation are generally robust. They perform least well with deterministic service times (Table 3), yet remain useful also in that case when ρ is large enough. In Tables 5-10, we consider the $M/G/100+G$ model with alternative service and abandonment-time distributions. Our results are similar to the

$M/G/s$ model in that WA and WA-run remain superior predictors, and the correlation estimates results are consistent with our theoretical expressions, which indicate that our asymptotic results are useful in describing more general systems as well. In Tables 11-18, we present simulation results for the two-class model with priorities, first without abandonment (Tables 11-12) then with abandonment (Tables 13-18). Once more, the results substantiate the superiority of the WA and WA-run predictions, and the usefulness of our asymptotic expressions for the correlations. In Tables 19 and 20, we consider the time-varying model. In Table 19, we fix $\rho_H = 5$ and $\rho_L = 0.2$. We also let $\alpha = 0.3$ and vary the value of the frequency γ. The results substantiate the superiority of the WA prediction. The correlation estimates are non-monotonic in the frequency γ, and an analysis of their values is left as a direction for future work. We see consistent results in Table 20 where we include abandonment to the time-varying model.

2. Tables with Simulation Results for Single-Class Model

ρ	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.7	8.60×10^{-4} $\pm 5.8 \times 10^{-6}$	1.36×10^{-3} $\pm 8.1 \times 10^{-6}$	7.33×10^{-4} $\pm 6.1 \times 10^{-6}$	7.51×10^{-4} $\pm 7.6 \times 10^{-6}$	8.51×10^{-4} $\pm 6.5 \times 10^{-6}$	0.712 $\pm 1.3 \times 10^{-3}$	0.0370 $\pm 1.3 \times 10^{-4}$
0.75	9.81×10^{-4} $\pm 5.2 \times 10^{-6}$	1.65×10^{-3} $\pm 7.9 \times 10^{-6}$	8.40×10^{-4} $\pm 5.8 \times 10^{-6}$	8.42×10^{-4} $\pm 6.3 \times 10^{-6}$	9.73×10^{-4} $\pm 5.0 \times 10^{-6}$	0.726 $\pm 2.9 \times 10^{-4}$	0.0407 $\pm 1.0 \times 10^{-4}$
0.8	1.19×10^{-3} $\pm 2.0 \times 10^{-6}$	2.52×10^{-3} $\pm 9.0 \times 10^{-6}$	1.06×10^{-3} $\pm 2.3 \times 10^{-6}$	1.06×10^{-3} $\pm 2.7 \times 10^{-6}$	1.19×10^{-3} $\pm 1.8 \times 10^{-6}$	0.779 $\pm 4.6 \times 10^{-4}$	0.0507 $\pm 8.1 \times 10^{-5}$
0.85	1.50×10^{-3} $\pm 3.4 \times 10^{-6}$	4.32×10^{-3} $\pm 2.9 \times 10^{-5}$	1.36×10^{-3} $\pm 4.1 \times 10^{-6}$	1.36×10^{-3} $\pm 4.4 \times 10^{-6}$	1.49×10^{-3} $\pm 3.2 \times 10^{-6}$	0.837 $\pm 7.7 \times 10^{-4}$	0.0674 $\pm 6.6 \times 10^{-5}$
0.9	2.17×10^{-3} $\pm 2.1 \times 10^{-6}$	9.85×10^{-3} $\pm 2.3 \times 10^{-5}$	2.05×10^{-3} $\pm 2.6 \times 10^{-6}$	2.05×10^{-3} $\pm 2.6 \times 10^{-6}$	2.17×10^{-3} $\pm 1.9 \times 10^{-6}$	0.894 $\pm 1.7 \times 10^{-4}$	0.0993 $\pm 6.3 \times 10^{-5}$
0.95	4.23×10^{-3} $\pm 1.3 \times 10^{-5}$	4.05×10^{-2} $\pm 3.3 \times 10^{-4}$	4.12×10^{-3} $\pm 1.3 \times 10^{-5}$	4.12×10^{-3} $\pm 1.4 \times 10^{-5}$	4.23×10^{-3} $\pm 1.4 \times 10^{-5}$	0.949 $\pm 2.6 \times 10^{-4}$	0.203 $\pm 6.2 \times 10^{-4}$
0.98	1.01×10^{-2} $\pm 4.1 \times 10^{-5}$	0.258 $\pm 2.9 \times 10^{-3}$	1.00×10^{-2} $\pm 4.1 \times 10^{-5}$	1.02×10^{-2} $\pm 4.5 \times 10^{-5}$	1.01×10^{-2} $\pm 4.1 \times 10^{-5}$	0.981 $\pm 1.5 \times 10^{-4}$	0.491 $\pm 3.4 \times 10^{-3}$

Table 1: Comparison of the ASE's for the different predictions in the $M/M/100$ model for alternative values of ρ.

ρ	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.7	8.97×10^{-4} $\pm 2.4 \times 10^{-6}$	1.35×10^{-3} $\pm 5.7 \times 10^{-6}$	7.82×10^{-4} $\pm 2.6 \times 10^{-6}$	7.93×10^{-4} $\pm 2.9 \times 10^{-6}$	8.96×10^{-4} $\pm 3.1 \times 10^{-6}$	0.687 $\pm 4.8 \times 10^{-4}$	0.0348 $\pm 5.6 \times 10^{-5}$
0.75	8.19×10^{-4} $\pm 2.1 \times 10^{-6}$	1.21×10^{-3} $\pm 4.8 \times 10^{-6}$	6.72×10^{-4} $\pm 2.1 \times 10^{-6}$	6.62×10^{-4} $\pm 2.2 \times 10^{-6}$	8.09×10^{-4} $\pm 2.0 \times 10^{-6}$	0.688 $\pm 9.0 \times 10^{-4}$	0.0385 $\pm 5.1 \times 10^{-5}$
0.8	1.03×10^{-3} $\pm 4.1 \times 10^{-7}$	2.18×10^{-3} $\pm 3.2 \times 10^{-6}$	9.09×10^{-4} $\pm 4.1 \times 10^{-7}$	9.10×10^{-4} $\pm 3.5 \times 10^{-7}$	1.02×10^{-3} $\pm 4.1 \times 10^{-7}$	0.782 $\pm 3.7 \times 10^{-4}$	0.0458 $\pm 1.3 \times 10^{-5}$
0.85	1.32×10^{-3} $\pm 1.8 \times 10^{-6}$	3.66×10^{-3} $\mp 2.0 \times 10^{-5}$	1.20×10^{-3} $\pm 2.1 \times 10^{-6}$	1.20×10^{-3} $\pm 2.4 \times 10^{-6}$	1.31×10^{-3} $\pm 1.8 \times 10^{-6}$	0.831 $\pm 8.4 \times 10^{-4}$	0.0619 $\pm 1.1 \times 10^{-4}$
0.9	1.85×10^{-3} $\pm 1.7 \times 10^{-6}$	8.46×10^{-3} $\pm 1.2 \times 10^{-5}$	1.74×10^{-3} $\pm 1.4 \times 10^{-5}$	1.74×10^{-3} $\pm 1.4 \times 10^{-6}$	1.85×10^{-3} $\pm 2.0 \times 10^{-6}$	0.896 $\pm 3.3 \times 10^{-5}$	0.0920 $\pm 1.7 \times 10^{-4}$
0.95	3.65×10^{-3} $\pm 5.3 \times 10^{-6}$	4.00×10^{-2} $\pm 1.7 \times 10^{-4}$	3.57×10^{-3} $\pm 6.1 \times 10^{-6}$	3.57×10^{-3} $\pm 5.9 \times 10^{-6}$	3.65×10^{-3} $\pm 5.4 \times 10^{-6}$	0.955 $\pm 1.3 \times 10^{-4}$	0.192 $\pm 6.8 \times 10^{-5}$
0.98	9.42×10^{-3} $\pm 5.5 \times 10^{-6}$	0.245 $\pm 4.1 \times 10^{-4}$	9.34×10^{-3} $\pm 5.4 \times 10^{-6}$	9.36×10^{-3} $\pm 1.7 \times 10^{-5}$	9.42×10^{-3} $\pm 5.5 \times 10^{-6}$	0.981 $\pm 1.2 \times 10^{-5}$	0.497 $\pm 9.8 \times 10^{-4}$

Table 2: Comparison of the ASE's for the different predictions in the $M/LN(1,1)/100$ model for alternative values of ρ, i.e., where $\mathbb{E}[S] = \mathrm{Var}[S] = 1$.

ρ	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.7	6.35×10^{-4} $\pm 1.9 \times 10^{-6}$	6.10×10^{-4} $\pm 4.1 \times 10^{-6}$	4.94×10^{-4} $\pm 1.6 \times 10^{-6}$	4.69×10^{-4} $\pm 2.5 \times 10^{-6}$	6.16×10^{-4} $\pm 1.8 \times 10^{-6}$	0.530 $\pm 4.0 \times 10^{-3}$	0.027 $\pm 1.0 \times 10^{-4}$
0.75	6.98×10^{-4} $\pm 3.0 \times 10^{-6}$	7.82×10^{-4} $\pm 4.1 \times 10^{-6}$	5.66×10^{-4} $\pm 3.0 \times 10^{-6}$	5.35×10^{-4} $\pm 3.1 \times 10^{-6}$	6.88×10^{-4} $\pm 2.9 \times 10^{-6}$	0.597 $\pm 1.7 \times 10^{-3}$	0.0317 $\pm 2.7 \times 10^{-5}$
0.8	8.57×10^{-4} $\pm 1.8 \times 10^{-6}$	1.205×10^{-3} $\pm 3.3 \times 10^{-6}$	7.28×10^{-4} $\pm 1.5 \times 10^{-6}$	6.98×10^{-4} $\pm 1.7 \times 10^{-6}$	8.50×10^{-4} $\pm 1.9 \times 10^{-6}$	0.674 $\pm 4.0 \times 10^{-4}$	0.0386 $\pm 6.2 \times 10^{-5}$
0.85	1.01×10^{-3} $\pm 1.0 \times 10^{-6}$	1.71×10^{-3} $\pm 2.7 \times 10^{-6}$	8.93×10^{-4} $\pm 6.9 \times 10^{-7}$	8.56×10^{-4} $\pm 6.7 \times 10^{-7}$	1.00×10^{-3} $\pm 1.0 \times 10^{-6}$	0.727 $\pm 3.0 \times 10^{-4}$	0.0472 $\pm 5.9 \times 10^{-5}$
0.9	1.28×10^{-3} $\pm 1.5 \times 10^{-6}$	3.07×10^{-3} $\pm 7.4 \times 10^{-6}$	1.18×10^{-3} $\pm 1.9 \times 10^{-6}$	1.14×10^{-3} $\pm 2.1 \times 10^{-6}$	1.28×10^{-3} $\pm 1.7 \times 10^{-6}$	0.804 $\pm 2.5 \times 10^{-4}$	0.0635 $\pm 8.1 \times 10^{-5}$
0.95	1.99×10^{-3} $\pm 1.2 \times 10^{-6}$	1.02×10^{-2} $\pm 2.0 \times 10^{-5}$	1.92×10^{-3} $\pm 1.2 \times 10^{-6}$	1.90×10^{-3} $\pm 2.0 \times 10^{-6}$	1.99×10^{-3} $\pm 1.3 \times 10^{-6}$	0.907 $\pm 1.7 \times 10^{-4}$	0.113 $\pm 9.1 \times 10^{-5}$
0.98	3.78×10^{-3} $\pm 3.11 \times 10^{-6}$	6.36×10^{-2} $\pm 1.4 \times 10^{-4}$	3.73×10^{-3} $\pm 3.1 \times 10^{-6}$	3.72×10^{-3} $\pm 3.5 \times 10^{-6}$	3.77×10^{-3} $\pm 3.3 \times 10^{-6}$	0.971 $\pm 5.8 \times 10^{-5}$	0.259 $\pm 2.9 \times 10^{-4}$

Table 3: Comparison of the ASE's for the different predictions in the $M/D/100$ model for alternative values of ρ, i.e., where $\mathbb{E}[S] = 1$.

ρ	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.7	8.16×10^{-4} $\pm 1.8 \times 10^{-5}$	1.29×10^{-3} $\pm 7.6 \times 10^{-5}$	6.90×10^{-4} $\pm 2.0 \times 10^{-5}$	7.41×10^{-4} $\pm 3.8 \times 10^{-5}$	8.10×10^{-4} $\pm 1.9 \times 10^{-5}$	0.704 $\pm 1.5 \times 10^{-2}$	0.0329 $\pm 2.0 \times 10^{-4}$
0.75	8.25×10^{-4} $\pm 3.8 \times 10^{-6}$	1.10×10^{-3} $\pm 5.2 \times 10^{-6}$	6.91×10^{-4} $\pm 3.3 \times 10^{-6}$	6.78×10^{-4} $\pm 3.2 \times 10^{-6}$	8.16×10^{-4} $\pm 4.1 \times 10^{-6}$	0.654 $\pm 4.0 \times 10^{-4}$	0.0351 $\pm 6.3 \times 10^{-5}$
0.8	9.76×10^{-4} $\pm 2.1 \times 10^{-6}$	1.65×10^{-3} $\pm 3.8 \times 10^{-6}$	8.40×10^{-4} $\pm 2.0 \times 10^{-6}$	8.24×10^{-4} $\pm 2.1 \times 10^{-6}$	9.70×10^{-4} $\pm 2.1 \times 10^{-6}$	0.728 $\pm 2.4 \times 10^{-4}$	0.0440 $\pm 2.7 \times 10^{-5}$
0.85	1.21×10^{-3} $\pm 3.1 \times 10^{-6}$	2.82×10^{-3} $\pm 2.1 \times 10^{-5}$	1.09×10^{-3} $\pm 3.0 \times 10^{-6}$	1.08×10^{-3} $\pm 3.4 \times 10^{-6}$	1.21×10^{-3} $\pm 3.1 \times 10^{-6}$	0.799 $\pm 1.0 \times 10^{-3}$	0.0562 $\pm 1.1 \times 10^{-4}$
0.9	1.66×10^{-3} $\pm 1.0 \times 10^{-6}$	6.00×10^{-3} $\pm 4.8 \times 10^{-6}$	1.55×10^{-3} $\pm 1.3 \times 10^{-6}$	1.55×10^{-3} $\pm 1.1 \times 10^{-6}$	1.66×10^{-3} $\pm 1.1 \times 10^{-6}$	0.869 $\pm 5.6 \times 10^{-5}$	0.0815 $\pm 3.3 \times 10^{-5}$
0.95	3.00×10^{-3} $\pm 4.6 \times 10^{-6}$	2.36×10^{-2} $\pm 2.3 \times 10^{-4}$	2.91×10^{-3} $\pm 5.6 \times 10^{-6}$	2.91×10^{-3} $\pm 5.9 \times 10^{-6}$	3.00×10^{-3} $\pm 4.7 \times 10^{-6}$	0.938 $\pm 5.0 \times 10^{-4}$	0.158 $\pm 2.4 \times 10^{-4}$
0.98	6.32×10^{-3} $\pm 3.9 \times 10^{-6}$	0.114 $\pm 2.7 \times 10^{-4}$	6.24×10^{-3} $\pm 4.2 \times 10^{-6}$	6.24×10^{-3} $\pm 7.4 \times 10^{-6}$	6.32×10^{-3} $\pm 3.9 \times 10^{-6}$	0.973 $\pm 5.6 \times 10^{-5}$	0.363 $\pm 7.7 \times 10^{-4}$

Table 4: Comparison of the ASE's for the different predictions in the $M/E_2/100$ model for alternative values of ρ, i.e., where $\mathbb{E}[S] = 1$.

ρ	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
1.1	4.26×10^{-3} $\pm 1.4 \times 10^{-5}$	1.51×10^{-2} $\pm 1.0 \times 10^{-4}$	4.00×10^{-3} $\pm 1.3 \times 10^{-5}$	3.96×10^{-3} $\pm 1.3 \times 10^{-5}$	4.26×10^{-3} $\pm 1.4 \times 10^{-5}$	0.862 $\pm 8.2 \times 10^{-4}$	0.218 $\pm 8.3 \times 10^{-4}$
1.3	9.4×10^{-3} $\pm 2.5 \times 10^{-5}$	2.00×10^{-2} $\pm 1.2 \times 10^{-4}$	8.33×10^{-3} $\pm 2.5 \times 10^{-5}$	8.33×10^{-3} $\pm 2.5 \times 10^{-5}$	9.44×10^{-3} $\pm 2.5 \times 10^{-5}$	0.766 $\pm 9.5 \times 10^{-4}$	0.530 $\pm 7.7 \times 10^{-4}$
1.5	1.35×10^{-2} $\pm 3.1 \times 10^{-5}$	2.02×10^{-2} $\pm 1.1 \times 10^{-4}$	1.13×10^{-2} $\pm 2.2 \times 10^{-5}$	1.13×10^{-2} $\pm 2.2 \times 10^{-5}$	1.35×10^{-2} $\pm 3.2 \times 10^{-5}$	0.666 $\pm 2.1 \times 10^{-3}$	0.816 $\pm 1.1 \times 10^{-3}$
1.7	1.67×10^{-2} $\pm 3.2 \times 10^{-5}$	2.02×10^{-2} $\pm 1.6 \times 10^{-4}$	1.33×10^{-2} $\pm 3.7 \times 10^{-5}$	1.33×10^{-2} $\pm 3.7 \times 10^{-5}$	1.67×10^{-2} $\pm 3.3 \times 10^{-5}$	0.588 $\pm 3.1 \times 10^{-3}$	1.07 $\pm 6.9 \times 10^{-4}$
2	0.0202 $\pm 1.2 \times 10^{-4}$	0.0200 $\pm 2.1 \times 10^{-4}$	0.0151 $\pm 1.1 \times 10^{-4}$	0.0151 $\pm 1.1 \times 10^{-4}$	0.0202 $\pm 1.2 \times 10^{-4}$	0.496 $\pm 3.9 \times 10^{-3}$	1.39 $\pm 1.1 \times 10^{-3}$
2.2	0.022 $\pm 1.2 \times 10^{-4}$	0.0201 $\pm 1.4 \times 10^{-4}$	0.0160 $\pm 9.2 \times 10^{-5}$	0.0160 $\pm 9.3 \times 10^{-5}$	0.0220 $\pm 1.2 \times 10^{-4}$	0.455 $\pm 23.0 \times 10^{-3}$	1.58 $\pm 1.0 \times 10^{-3}$
2.5	0.0241 $\pm 2.4 \times 10^{-4}$	0.0203 $\pm 2.0 \times 10^{-4}$	0.0169 $\pm 1.7 \times 10^{-4}$	0.0169 $\pm 1.7 \times 10^{-4}$	0.0241 $\pm 2.4 \times 10^{-4}$	0.399 $\pm 1.9 \times 10^{-3}$	1.84 $\pm 8.2 \times 10^{-4}$

Table 5: Comparison of the ASE's for the different predictions in the $M/M/100 + M$ model for alternative values of ρ, i.e., where $\mathbb{E}[S] = 1$ and $\theta = 0.5$.

ρ	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
1.1	0.0155 ±4.4E-05	0.0294 ±0.00028	0.0143 ±4.0E-05	0.0134 ±3.8E-05	0.0155 ±4.3E-05	0.738 ±0.0026	0.923 ±0.00093
1.3	0.0173 ±4.4E-05	0.0155 ±7.4E-05	0.0141 ±3.7E-05	0.0125 ±3.8E-05	0.0172 ±4.4E-05	0.445 ±0.0023	1.26 ±0.00055
1.5	0.0174 ±5.2E-05	0.0128 ±5.1E-05	0.0130 ±3.7E-05	0.0115 ±3.3E-05	0.0174 ±5.2E-05	0.320 ±0.0027	1.46 ±0.00045
1.7	0.0175 ±7.7E-05	0.0116 ±4.7E-05	0.0123 ±5.2E-05	0.0109 ±4.2E-05	0.0175 ±7.7E-05	0.248 ±0.0028	1.61 ±0.00045
2	0.0174 ±7.0E-05	0.0106 ±4.5E-05	0.0113 ±4.1E-05	0.0103 ±3.8E-05	0.0174 ±7.0E-05	0.183 ±0.0036	1.79 ±0.00047
2.2	0.0173 ±6.8E-05	0.0103 ±4.0E-05	0.0109 ±3.9E-05	0.0100 ±3.7E-05	0.0173 ±6.8E-05	0.159 ±0.0024	1.89 ±0.00038
2.5	0.0173 ±8.2E-05	0.00992 ±5.6E-05	0.0105 ±5.3E-05	0.00977 ±5.2E-05	0.0173 ±8.2E-05	0.127 ±0.0023	2.02 ±0.00021

Table 6: Comparison of the ASE's for the different predictions in the $M/M/100 + LN(2,1)$ model for alternative values of ρ, for $\mathbb{E}[T] = 2$ and $\mathrm{Var}[T] = 1$ where T is time to abandon.

ρ	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
1.1	0.00905 ±2.2E-05	0.0306 ±0.00020	0.00849 ±2.1E-05	0.00839 ±2.3E-05	0.00906 ±2.2E-05	0.854 ±0.00084	0.488 ±0.0010
1.3	0.0148 ±5.6E-05	0.0212 ±0.00013	0.0125 ±4.6E-05	0.0122 ±4.5E-05	0.0148 ±5.5E-05	0.653 ±0.0021	0.908 ±0.00061
1.5	0.0176 ±5.9E-05	0.0185 ±9.31E-05	0.0138 ±4.5E-05	0.0134 ±4.4E-05	0.0176 ±5.9E-05	0.526 ±0.0023	1.19 ±0.00081
1.7	0.0193 ±9.1E-05	0.0172 ±8.5E-05	0.0142 ±6.5E-05	0.0139 ±6.2E-05	0.0193 ±9.1E-05	0.439 ±0.0017	1.41 ±0.00052
2	0.0209 ±9.0E-05	0.0159 ±5.9E-05	0.0144 ±5.3E-05	0.0141 ±4.9E-05	0.0209 ±8.9E-05	0.347 ±0.0022	1.68 ±0.00044
2.2	0.0215 ±0.00011	0.0154 ±0.00012	0.0144 ±7.9E-05	0.0140 ±8.5E-05	0.0215 ±0.00011	0.304 ±0.0037	1.83 ±0.00052
2.5	0.0224 ±9.5E-05	0.0151 ±8.9E-05	0.0144 ±5.9E-05	0.0141 ±6.4E-05	0.0224 ±9.5E-05	0.259 ±0.0040	2.03 ±0.00067

Table 7: Comparison of the ASE's for the different predictions in the $M/M/100 + E_2$ model for alternative values of ρ, i.e., where $\mathbb{E}[S] = \mathrm{Var}[S] = 1$ and $\theta = 0.5$.

ρ	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
1.1	0.00187 ±4.7E-06	0.00387 ±1.3E-05	0.00174 ±4.3E-06	0.00165 ±4.1E-06	0.00187 ±4.69E-06	0.767 ±0.00043	0.0937 ±0.00020
1.3	0.00318 ±6.0E-06	0.00605 ±2.1E-05	0.00277 ±5.5E-06	0.00276 ±5.5E-06	0.00318 ±6.0E-06	0.743 ±0.00094	0.174 ±0.00020
1.5	0.00448 ±9.4E-06	0.00659 ±1.7E-05	0.00372 ±6.8E-06	0.00372 ±6.8E-06	0.00448 ±9.4E-06	0.665 ±0.00091	0.265 ±0.00019
1.7	0.00554 ±1.5E-05	0.00674 ±1.6E-05	0.00440 ±1.02E-05	0.00440 ±1.0E-05	0.00554 ±1.5E-05	0.593 ±0.0013	0.347 ±0.00022
2	0.00681 ±1.9E-05	0.00690 ±3.3E-05	0.00513 ±1.7E-05	0.00513 ±1.6E-05	0.00680 ±1.9E-05	0.511 ±0.0015	0.457 ±0.00024
2.2	0.00750 ±1.5E-05	0.00706 ±2.7E-05	0.00551 ±1.1E-05	0.00551 ±1.1E-05	0.007498 ±1.5E-05	0.472 ±0.0020	0.523 ±0.00032
2.5	0.00840 ±2.7E-05	0.00725 ±3.7E-05	0.00597 ±2.2E-05	0.00597 ±2.2E-05	0.00839 ±2.7E-05	0.424 ±0.0024	0.613 ±0.00023

Table 8: Comparison of the ASE's for the different predictions in the $M/M/100 + H_2$ model for alternative values of ρ, i.e., where $\mathbb{E}[S] = \text{Var}[S] = 1$ and $\text{Var}[T] = 4$ where T is time to abandon.

ρ	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
1.1	0.00816 ±2.2E-05	0.0234 ±0.00017	0.00762 ±2.1E-05	0.00745 ±2.1E-05	0.00816 ±2.3E-05	0.827 ±0.0014	0.449 ±0.00062
1.3	0.0123 ±4.5E-05	0.0164 ±9.3E-05	0.0103 ±3.4E-05	0.0100 ±3.1E-05	0.0123 ±4.5E-05	0.627 ±0.0022	0.766 ±0.00060
1.5	0.0146 ±4.3E-05	0.0152 ±9.8E-05	0.0114 ±3.41E-05	0.0111 ±3.7E-05	0.0146 ±4.3E-05	0.520 ±0.0031	0.991 ±0.00046
1.7	0.0164 ±7.5E-05	0.0149 ±6.8E-05	0.0121 ±5.3E-05	0.0118 ±5.2E-05	0.0164 ±7.5E-05	0.450 ±0.0015	1.17 ±0.00055
2	0.0184 ±8.3E-05	0.0148 ±5.0E-05	0.0129 ±4.9E-05	0.0127 ±4.4E-05	0.0184 ±8.3E-05	0.382 ±0.0024	1.42 ±0.00064
2.2	0.0194 ±9.8E-05	0.0149 ±4.6E-05	0.0132 ±5.7E-05	0.0131 ±5.2E-05	0.0194 ±9.8-05	0.349 ± 0.0020	1.56 ±0.00052
2.5	0.0208 ±9.9E-05	0.0151 ±8.3E-05	0.0137 ±5.4E-05	0.0136 ±5.5E-05	0.0208 ±9.9E-05	0.310 ±0.0042	1.75 ±0.00071

Table 9: Comparison of the ASE's for the different predictions in the $M/M/100 + LN(2, 4)$ model for alternative values of ρ, i.e., where $\mathbb{E}[S] = \text{Var}[S] = 1$, $\mathbb{E}[T] = 2$, $\text{Var}[T] = 4$ where T is time to abandon.

ρ	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
1.1	0.0126	0.0101	0.0115	0.00864	0.0125	0.377	1.91
	±3.6E-05	±0.00014	±3.3E-05	±6.5E-05	±3.7E-05	±0.0081	±0.00042
1.3	0.00241	0.00121	0.00191	0.00120	0.00237	0.00326	1.97
	±1.7E-05	±9.6E-06	±1.3E-05	±9.6E-06	±1.7E-05	±0.0014	±7.8E-05
1.5	0.00100	0.000500	0.000723	0.000500	0.000975	0.0000877	1.98
	±2.9E-06	±1.2E-06	±2.1E-06	±1.2E-06	±3.1E-06	±0.00091	±3.4E-05
1.7	0.000608	0.000304	0.000409	0.000304	0.000588	-0.000303	1.99
	±1.5E-06	±7.3E-07	±1.0E-06	±7.3E-07	±1.4E-06	±0.00065	±1.12E-05
2	0.000399	0.000200	0.000250	0.000200	0.000384	0.000341	1.99
	±5.8E-07	±4.0E-07	±4.5E-07	±4.0E-07	±5.2E-07	±0.00034	±5.9E-06
2.2	0.000338	0.000169	0.000204	0.000169	0.000325	-0.000304	2.00
	±3.4E-07	±3.0E-07	±3.6E-07	±3.06E-07	±4.5E-07	±0.00051	±8.8E-06
2.5	0.000289	0.000144	0.000168	0.000144	0.000278	0.000192	2.00
	±3.6E-07	±3.0E-07	±2.2E-07	±3.0E-07	±3.4E-07	±0.00042	±8.0E-06

Table 10: Comparison of the ASE's for the different predictions in the $M/M/100 + D$ model for alternative values of ρ, i.e., where $\mathbb{E}[S] = \mathrm{Var}[S] = 1$, and $\mathbb{E}[T] = 2$ where T is time to abandon.

3. Tables with Simulation Results for Two-Class Model with Priorities

ρ_L	ρ_H	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.35	0.5	0.0164 ±0.00011	0.0234 ±0.00058	0.0139 ±0.00014	0.0139 ±0.00015	0.0163 ±0.00011	0.659 ±0.0071	0.132 ±0.00071
0.375	0.5	0.0189 ±0.00013	0.0312 ±0.00057	0.0164 ±0.00013	0.0164 ±0.00014	0.0188 ±0.00013	0.707 ±0.0040	0.158 ±0.00074
0.4	0.5	0.0227 ±0.00014	0.0478 ±0.00081	0.0204 ±0.00015	0.0203 ±0.00015	0.0227 ±0.00015	0.771 ±0.0025	0.200 ±0.0013
0.425	0.5	0.0281 ±0.00022	0.0808 ±0.0021	0.0259 ±0.00024	0.0259 ±0.00025 ±	0.0280 0.00022	0.832 ±0.0031	0.264 ±0.0014
0.45	0.5	0.0393 ±0.00047	0.176 ±0.0049	0.0373 ±0.00048	0.0373 ±0.00048	0.0393 ±0.00047	0.892 ±0.0019	0.399 ±0.0043
0.475	0.5	0.0703 ±0.00098	0.649 ±0.026	0.0685 ±0.00096	0.0685 ±0.00097	0.0703 ±0.00098	0.946 ±0.0018	0.789 ±0.0086
0.49	0.5 ±	0.155 0.0053	3.219 ±0.29	0.154 ±0.0054	0.155 ±0.0048	0.155 ±0.0053	0.975 ±0.0013	1.85 ±0.059

Table 11: Comparison of the ASE's for the different predictions in the two-class $M/M/100$ model with priorities for alternative values of ρ_L and ρ_H.

ρ_L	ρ_H	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.35	0.5	0.0134 ±0.00013	0.0193 ±0.00022	0.0114 ±0.00011	0.0114 ±0.00011	0.0133 ±0.00013	0.664 ±0.0025	0.120 ±0.00034
0.375	0.5	0.0156 ±0.00013	0.0276 ±0.00048	0.0137 ±0.00012	0.0137 ±0.00012	0.0155 ±0.00013	0.729 ±0.0035	0.147 ±0.00073
0.4	0.5	0.0186 ±0.00015	0.0414 ±0.00064	0.0167 ±0.00014	0.0167 ±0.00014	0.0185 ±0.00015	0.784 ±0.0022	0.184 ±0.00097
0.425	0.5	0.0232 ±0.00023	0.0724 ±0.0015	0.0215 ±0.00023	0.0215 ±0.00023	0.0232 ±0.00023	0.846 ±0.0021	0.246 ±0.0016
0.45	0.5	0.03305 ±0.00046	0.164 ±0.0073	0.0315 ±0.00050	0.0315 ±0.00049	0.0330 ±0.00046	0.902 ±0.0030	0.377 ±0.0048
0.475	0.5	0.0620 ±0.0010	0.618 ±0.033	0.0605 ±0.0011	0.0605 ±0.0011	0.0620 ±0.0010	0.950 ±0.0020	0.768 ±0.010
0.49	0.5	0.146 ±0.0028	3.62 ±0.19	0.145 ±0.0028	0.146 ±0.0022	0.146 ±0.0028	0.979 ±0.00087	1.87 ±0.033

Table 12: Comparison of the ASE's for the different predictions in the two-class $M/LN(1,1)/100$ model with priorities for alternative values of ρ_L and ρ_H.

ρ_L	ρ_H	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.55	0.5	0.0266 ±5.3E-05	0.0477 ±0.00020	0.0247 ±4.9E-05	0.0232 ±4.9E-05	0.0266 ±5.3E-05	0.728 ±0.00090	0.300 ±0.00057
0.65	0.5	0.0410 ±0.00010	0.0722 ±0.00030	0.0357 ±9.9E-05	0.0355 ±0.00010	0.0410 ±0.00010	0.7206 ±0.00076	0.537 ±0.00075
0.75	0.5	0.0557 ±0.00013	0.0784 ±0.00030	0.0462 ±0.00012	0.0461 ±0.00012	0.0557 ±0.00013	0.647 ±0.0011	0.811 ±0.0011
0.85	0.5	0.0674 ±0.00020	0.0787 ±0.00041	0.0533 ±0.00016	0.0533 ±0.00016	0.0673 ±0.00021	0.573 ±0.0024	1.06 ±0.00083
1	0.5	0.0808 ± 0.00018	0.0787 ±0.00024	0.0604 ±0.00013	0.0604 ± 0.00013	0.0808 ±0.00018	0.486 ±0.0014	1.38 ±0.0013
1.1	0.5	0.0873 ±0.00035	0.0786 ±0.00036	0.0634 ±0.00022	0.0634 ±0.00022	0.0873 ±0.00035	0.444 ±0.0027	1.57 ±0.0010
1.25	0.5	0.0959 ±0.00039	0.0786 ±0.00051	0.0670 ±0.00032	0.0670 ±0.00033	0.0959 ±0.00039	0.387 ±0.0023	1.832 ±0.0018

Table 13: Comparison of the ASE's for the different predictions in the two-class $M/M/100+M$ model with priorities for alternative values of ρ_L and ρ_H, with $\theta = 0.5$.

ρ_L	ρ_H	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.55	0.5	0.0603 ± 0.00017	0.122 ±0.00043	0.0559 ± 0.00015	0.0531 ±0.00011	0.0602 ± 0.00017	0.756 ±0.0013	0.852 ±0.0020
0.65	0.5	0.0707 ± 0.00025	0.0675 ±0.00041	0.0583 ±0.00021	0.0526 ±0.00021	0.0706 ±0.00025	0.476 ±0.0029	1.24 ±0.00064
0.75	0.5	0.0718 ±0.00023	0.0534 ±0.00021	0.0542 ±0.00018	0.0480 ±0.00016	0.0718 ±0.00023	0.322 ± 0.0022	1.460 ±0.00057
0.85	0.5	0.0719 ± 0.00016	0.0482 ±0.00012	0.0508 ± 0.00011	0.0454 ±0.00010	0.0718 ±0.00016	0.246 ±0.0012	1.61 ±0.00052
1	0.5	0.0717 ± 0.00033	0.0443 ±0.00017	0.0473 ±0.00021	0.0429 ±0.00017	0.0716 ±0.00033	0.179 ±0.0013	1.80 ±0.00054
1.1	0.5	0.0711 ± 0.00020	0.0426 ±0.00018	0.0454 ±0.00014	0.0417 ±0.00015	0.0710 ±0.00020	0.152 ±0.0028	1.90 ±0.00097
1.25	0.5	0.0709 ±0.00030	0.0411 ±0.00021	0.0435 ±0.00019	0.0405 ±0.000206	0.0709 ±0.00030	0.124 ±0.0031	2.03 ±0.00070

Table 14: Comparison of the ASE's for the different predictions in the two-class $M/M/100 + LN(2,1)$ model with priorities for alternative values of ρ_L and ρ_H, with $\mathbb{E}[T] = 2$ where T is time to abandon.

ρ_L	ρ_H	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.55	0.5	0.0425 ±0.00013	0.0892 ±0.00029	0.0395 ±0.00012	0.0377 ±0.00011	0.0425 ±0.00013	0.766 ±0.00068	0.521 ±0.0011
0.65	0.5	0.0623 ± 0.00014	0.0876 ±0.00044	0.0528 ±0.00012	0.0516 ±0.00011	0.0622 ±0.00014	0.647 ±0.0020	0.902 ±0.0014
0.75	0.5	0.0734 ± 0.00019	0.0758 ± 0.00033	0.0577 ± 0.00015	0.0560 ± 0.00015	0.0733 ± 0.00019	0.516 ±0.00212	1.19 ±0.0013
0.85	0.5	0.0802 ±0.00026	0.0702 ±0.00028	0.0595 ±0.00018	0.0577 ±0.00018	0.0802 ±0.00026	0.426 ±0.0018	1.41 ±0.0011
1	0.5	0.0861 ±0.00055	0.0653 ±0.00044	0.0598 ±0.00037	0.0581 ± 0.00036	0.0860 ±0.00055	0.337 ±0.0028	1.68 ±0.00066
1.1	0.5	0.0887 ±0.00034	0.0633 ±0.00033	0.0595 ±0.00025	0.0580 ±0.00026	0.0886 ±0.00034	0.294 ±0.0023	1.84 ±0.00089
1.25	0.5	0.0912 ±0.00046	0.0611 ±0.00037	0.0589 ±0.00030	0.0575 ±0.00031	0.0911 ±0.00046	0.247 ±0.0040	2.03 ±0.0013

Table 15: Comparison of the ASE's for the different predictions in the two-class $M/M/100 + E_2$ model with priorities for alternative values of ρ_L and ρ_H, with $\mathbb{E}[T] = 2$ where T is time to abandon.

ρ_L	ρ_H	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.55	0.5	0.0129 ±3.0E-05	0.0140 ±5.0E-05	0.0119 ±2.8E-05	0.0102 ±2.9E-05	0.0128 ±2.9E-05	0.546 ±0.0010	0.144 ±0.00018
0.65	0.5	0.0160 ±4.0E-05	0.0188 ±6.5E-05	0.0135 ±3.5E-05	0.0129 ±3.6E-05	0.0160 ±4.0E-05	0.583 ±0.00083	0.201 ±0.00025
0.75	0.5	0.0194 ± 2.4E-05	0.0227 ±5.0E-05	0.0157 ±2.3E-05	0.0156 ±2.4E-05	0.0194 ±2.4E-05	0.579 ±0.00083	0.270 ±0.00030
0.85	0.5	0.0228 ±5.8E-05	0.0250 ±6.2E-05	0.0179 ±5.0E-05	0.0179 ±5.0E-05	0.0228 ±5.8E-05	0.548 ±0.00097	0.345 ±0.00042
1	0.5	0.0272 ±8.7E-05	0.0264 ±0.00013	0.0205 ±7.99E-05	0.0205 ± 8.0E-05	0.0272 ±8.7E-05	0.485 ±0.0013	0.454 ±0.00036
1.1	0.5	0.0296 ±9.8E-05	0.0268 ±0.00011	0.0217 ±8.6E-05	0.0217 ±8.6E-05	0.0296 ±9.7E-05	0.448 ±0.0011	0.519 ±0.00038
1.25	0.5	0.0329 ±8.3E-05	0.0275 ±0.00011	0.0233 ±7.3E-05	0.0233 ±7.2E-05	0.0328 ±8.3E-05	0.401 ±0.0020	0.609 ±0.00059

Table 16: Comparison of the ASE's for the different predictions in the two-class $M/M/100+H_2$ model with priorities for alternative values of ρ_L and ρ_H, with $\mathbb{E}[T]=1$, $\mathrm{Var}[T]=4$ where T is time to abandon.

ρ_L	ρ_H	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.55	0.5	0.0603 ± 0.00017	0.122 ±0.00043	0.0559 ±0.00015	0.0531 ±0.00011	0.0602 ±0.00017	0.756 ±0.0013	0.852 ±0.0020
0.65	0.5	0.0707 ±0.00025	0.0675 ±0.00041	0.0583 ± 0.00021	0.0526 ±0.00021	0.0706 ±0.00025	0.476 ±0.0029	1.24 ±0.00064
0.75	0.5	0.0718 ±0.00023	0.0534 ±0.00021	0.0542 ± 0.00018	0.0480 ±0.00016	0.0718 ±0.00023	0.322 ±0.0022	1.46 ±0.00057
0.85	0.5	0.0719 ± 0.00016	0.0482 ±0.00012	0.0508 ± 0.00011	0.0454 ± 0.00011	0.0718 ±0.00016	0.246 ± 0.0012	1.61 ±0.00052
1	0.5	0.0717 ± 0.00033	0.0443 ±0.00017	0.0473 ±0.00021	0.0429 ±0.00017	0.0716 ±0.00033	0.179 ±0.0013	1.801 ±0.00054
1.1	0.5	0.0711 ± 0.00020	0.0426 ± 0.00018	0.0454 ±0.00014	0.0417 ±0.00015	0.0710 ± 0.00020	0.152 ±0.0028	1.90 ±0.00097
1.25	0.5	0.0709 ±0.00030	0.0411 ±0.00021	0.0435 ±0.00019	0.0405 ±0.00020	0.0709 ±0.00030	0.124 ±0.0031	2.03 ±0.00070

Table 17: Comparison of the ASE's for the different predictions in the two-class $M/M/100+LN(2,4)$ model with priorities for alternative values of ρ_L and ρ_H, with $\mathbb{E}[T]=2$, $\mathrm{Var}[T]=4$ where T is time to abandon.

ρ_L	ρ_H	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0.55	0.5	0.0690 ±0.00019	0.129 ±0.0016	0.0639 ±0.00017	0.0601 ±0.00019	0.0689 ±0.00019	0.735 ±0.0035	1.66 ±0.0019
0.65	0.5	0.0278 ±0.00015	0.0170 ±0.00015	0.0226 ±0.00012	0.0167 ±0.00012	0.0277 ±0.00015	0.150 ±0.0052	1.92 ±0.00023
0.75	0.5	0.0135 ±5.02E-05	0.00767 ±3.5E-05	0.0102 ±4.0E-05	0.00767 ±3.5E-05	0.0134 ±5.0E-05	0.0124 ±0.0020	1.973 ±0.00011
0.85	0.5	0.00892 ±2.4E-05	0.00526 ±1.8E-0	0.00653 5 ±2.2E-05	0.00526 ±1.8E-05	0.00884 ±2.4E-05	0.000702 ±0.00089	1.99 ±7.2E-05
1	0.5	0.00661 ±2.1E-05	0.00411 ±1.7E-05	0.00474 ±1.9E-05	0.00411 ±1.7E-05	0.00655 ±2.1E-05	-0.000371 ± 0.00076	2.01 ±3.7E-05
1.1	0.5	0.00597 ±2.9E-05	0.00378 ±2.3E-05	0.00424 ±2.4E-05	0.00378 ±2.3E-05	0.00592 ±3.0E-05	-0.000246 ±0.00077	2.015 ±8.4E-05
1.25	0.5	0.0055 ±1.9E-05	0.00355 ±1.45E-05	0.003864 ±1.47E-05	0.00355 ±1.4E-05	0.00546 ±1.9E-05	0.000521 ±0.00083	2.02 ±6.4E-05

Table 18: Comparison of the ASE's for the different predictions in the two-class $M/M/100 + D$ model with priorities for alternative values of ρ_L and ρ_H, with $\mathbb{E}[T] = 2$ where T is time to abandon.

4. Tables with Simulation Results for Time-Varying Arrivals

γ	ρ_L	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0	0.2	0.103 ± 0.00067	0.0775 ±0.00072	0.0737 ±0.00056	0.0729 ±0.00059	0.117 ±0.0098	0.283 ±0.0026	0.221 ±0.00051
0.0436	0.2	0.597 ±0.0076	0.818 ±0.016	0.556 ±0.0094	0.510 ±0.0074	0.815 ± 0.21	0.637 ±0.0034	0.723 ±0.0051
0.0873	0.2	0.566 ±0.0043	0.698 ±0.0097	0.499 ±0.0053	0.473 ±0.0042	0.682 ±0.17	0.593 ± 0.0037	0.682 ±0.0027
0.262	0.2	0.446 ±0.0030	0.417 ±0.0026	0.345 ± 0.0022	0.344 ±0.0022	0.450 ±0.0065	0.450 ± 0.0010	0.549 ±0.0019
0.524	0.2	0.320 ±0.0021	0.249 ±0.0021	0.230 ±0.0018	0.229 ±0.0018	0.350 ±0.041	0.321 ±0.0015	0.432 ±0.0012
1.571	0.2	0.147 ±0.00118	0.0981 ±0.00094	0.100 ±0.00086	0.0961 ±0.00087	0.153 ±0.010	0.183 ±0.0038	0.270 ±0.00054

Table 19: Comparison of the ASE's for the different predictions in the two-class $M_t/M/30$ model with priorities, sinusoidal arrivals with amplitude $\alpha = 0.3$ and varying frequency γ. We fix $\rho_H = 0.5$.

γ	ρ_L	ASE(LES)	ASE(EA)	ASE(WA)	ASE(WA-run)	ASE(EXP)	r	$\mathbb{E}[W\|W>0]$
0	0.3	0.0114 ±0.00047	0.0101 ± 0.00058	0.00895 ± 0.00041	0.008727 ±0.00043	0.0174 ±0.00073	0.411 ± 0.015	0.0857 ±0.001
0.0436	0.3	0.0543 ±0.0012	0.0747 ±0.0020	0.0461 ±0.0010	0.0456 ±0.0010	0.166 ±0.0044	0.640 ±0.0053	0.302 ±0.0041
0.0873	0.3	0.0528 ±0.00074	0.0718 ±0.0014	0.0448 ±0.00076	0.0447 ± 0.00074	0.159 ±0.0026	0.636 ±0.0039	0.2963 ±0.0021
0.262	0.3	0.0503 ± 0.00104	0.0633 ±0.0013	0.0417 ±0.00082	0.0417 ±0.00082	0.111 ±0.029	0.606 ±0.0037	0.273 ±0.0034
0.524	0.3	0.0433 ± 0.00088	0.0480 ±0.00097	0.0349 ±0.00076	0.0348 ±0.00076	0.101 ±0.0019	0.550 ±0.0039	0.231 ±0.0025
1.571	0.3	0.0233 ±0.00077	0.0194 ±0.00061	0.0177 ±0.00059	0.0170 ±0.00056	0.0349 ±0.0046	0.390 ±0.010	0.136 ±0.0014

Table 20: Comparison of the ASE's for the different predictions in the two-class $M_t/M/100+M$ model with priorities, sinusoidal arrivals with amplitude $\alpha = 0.3$ and varying frequency γ. We fix $\rho_H = 0.5$