Online Appendices

for

Reminders Work, But for Whom? Evidence from New York City Parking-Ticket Recipients

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Contents

1 A Model of Payment Behavior

In this appendix, we present the full details of the model described in Section 2 of the text. (Because we want this appendix to provide a complete analysis on its own, we repeat some passages from Section 2.)

Suppose that a person receives a parking ticket on day $d = 0$ with a fine amount f. On each day $d \in \{0, 1, ...\}$ she decides whether or not to pay the ticket. If she has not paid by an initial deadline d_1, a late penalty a_1 is imposed. Similarly, if she misses a second deadline $d_2 > d_1$, a second late penalty a_2 is imposed, and if she misses a third deadline $d_3 > d_2$, a third late penalty a_3 is imposed, after which more serious consequences occur. Hence, the total monetary cost that must be paid as a function of the day d on which the person completes the task is

$$A_d \equiv \begin{cases} f & \text{if } d \leq d_1 \\ f + a_1 & \text{if } d \in (d_1, d_2] \\ f + a_1 + a_2 & \text{if } d \in (d_2, d_3] \\ f + a_1 + a_2 + a_3 & \text{if } d > d_3. \end{cases}$$

1.1 Behavior without reminders

In our data, we observe hazard rates for a fixed set of deadlines and penalties that do not change over time. We first derive behavior as a function of those deadlines and penalties in the absence of any reminder letters (note that reminder letters will impact behavior only for those subject to forgetting).

Assumptions about the individual

After receiving a ticket, a person seeks a convenient (low-effort-cost) time to respond. Let c_d denote the realized effort cost on day d, drawn i.i.d. from some known (to the person) distribution F. The person knows F in advance, and each day d she learns the realization c_d and then decides whether to pay the ticket on that day. Hence, the total costs of paying the ticket on day d includes both the monetary cost A_d and the effort cost c_d. We assume that the effort cost c_d is experienced on day d (i.e., it is effort exerted now), while the monetary cost A_d is experienced on day $d + 1$ (i.e., it requires forgone future consumption).[1]

The person seeks to minimize her expected discounted total cost (effort cost plus monetary cost), where the person has β, δ discounting as in Laibson (1997) and O'Donoghue and

[1] For our examples below, where we make the natural assumption (given daily decisions) of $\delta = 1$, it is irrelevant when exactly in the future A_d is experienced.

Rabin (1999). Specifically, if $\gamma_{d'}$ is the (monetary or effort) cost incurred on day d', the expected discounted total cost from the perspective of day d is $\Gamma^d \equiv E\left[\gamma_d + \beta \sum_{d'=d+1}^{\infty} \delta^{d'-d}\gamma_{d'}\right]$. Hence, for instance, if on day d the person pays the ticket at an effort cost c_d, then $\Gamma^d = c_d + \beta\delta A_d$. Alternatively, if on day d the person commits to pay the ticket on day $d' > d$, then $\Gamma^d = \beta\delta^{d'-d}E(c_{d'}) + \beta\delta^{d'+1-d}A_{d'}$. More generally, the person will behave probabilistically each period, as we describe below.

β, δ discounting permits both standard exponential discounting (captured by $\delta \leq 1$) and a time-inconsistent present bias (captured by $\beta \leq 1$). If $\beta < 1$, it matters what the person believes about her own future present bias. Following O'Donoghue and Rabin (2001), we let $\hat{\beta} \in [\beta, 1]$ denote the person's belief about her future present bias. With this formulation, $\hat{\beta} = \beta$ implies the person is fully *sophisticated* and has correct beliefs, $\hat{\beta} = 1$ implies the person is fully *naive* and believes she'll have no future present bias, and $\hat{\beta} \in (\beta, 1)$ implies the person is *partially naive*.

We also permit that a person might forget about the need to make a payment. We assume that on day d the person can be in one of two states, $s_d = Y$ or $s_d = N$. The state $s_d = Y$ represents that the ticket is on the person's mind, in which case the person actively decides whether to pay it. The state $s_d = N$ represents that the ticket is not on the person's mind—i.e., she has forgotten about it—in which case the person necessarily does not pay the ticket.

The day-d state s_d depends on the day-$(d-1)$ state s_{d-1} according to $\Pr(s_d = Y|s_{d-1} = Y) = \lambda^Y$ and $\Pr(s_d = Y|s_{d-1} = N) = \lambda^N$. This structure nests several special cases. First, $\lambda^Y = \lambda^N = 1$ is the case of no forgetting. Second, $0 < \lambda^Y = \lambda^N < 1$ is the simple case where there is an i.i.d. probability of remembering on each day. Third, $0 \leq \lambda^N < \lambda^Y \leq 1$ is perhaps the main case of interest where the likelihood of thinking about paying the ticket today is larger if the person also thought about paying the ticket yesterday. We also assume an exogenous probability Λ_0^Y that the ticket is on the mind on day 0, reflecting that people might not fully register receiving the ticket.

This model of forgetting is similar in structure to that used in Holman and Zaidi (2010), Taubinsky (2014), Ericson (2017), and Altmann, Traxler, and Weinschenk (2017). An important issue highlighted in this literature is whether the person is aware versus unaware of her future propensity to forget. We let $\hat{\lambda}^Y$ and $\hat{\lambda}^N$ denote the person's beliefs about her future λ^Y and λ^N. Hence, $\hat{\lambda}^Y = \lambda^Y$ and $\hat{\lambda}^N = \lambda^N$ implies full awareness and understanding of future forgetting, while $\hat{\lambda}^Y = \hat{\lambda}^N = 1$ implies full unawareness. There are lots of cases in between.

Finally, we close the model by assuming that if a person delays beyond deadline d_3, there is an exogenous continuation cost z. This continuation cost is meant to capture all

the monetary costs (recall that $A_d = f + a_1 + a_2 + a_3$ for $d > d_3$) as well as all expected effort and other costs that might occur in the further future—and thus this continuation cost should be somewhat larger than $f + a_1 + a_2 + a_3$. Because continuation outcomes might depend on whether the ticket is on the mind on day d_3, we let z^Y and z^N denote, respectively, the (actual and perceived) continuation cost from period $d_3 + 1$ onward when $s_{d_3} = Y$ and $s_{d_3} = N$.

Deriving an individual's behavior

Recall that everything is expressed in terms of costs, and thus the person's objective is to minimize perceived expected discounted total costs.

Fully aware individuals: For expositional purposes, we start with the case of full awareness about both present bias ($\hat{\beta} = \beta$) and forgetting ($\hat{\lambda}^Y = \lambda^Y$ or $\hat{\lambda}^N = \lambda^N$). In this case, perceived expected discounted costs are identical to actual expected discounted costs.

Define W_{d+1} to be the "long-run" day-$(d+1)$ continuation costs for a person on day d with current state $s_d = Y$. In other words, for a person on day d with current state $s_d = Y$, if she waits now, then her expected discounted total costs starting on the next day will be W_{d+1}.

We derive W_{d+1} below, but first note that, given W_{d+1}, a person with $s_d = Y$ will make the payment on day d when

$$c_d + \beta\delta A_d \leq \beta\delta W_{d+1} \qquad \text{or} \qquad c_d \leq \beta\delta \left[W_{d+1} - A_d\right] \equiv \bar{c}_d.$$

Hence, the probability that a person with $s_d = Y$ will make the payment on day d is $F(\bar{c}_d)$.

We now derive W_{d+1}. Define W_d^Y to be "long-run" day-d continuation costs conditional on $s_d = Y$, and define W_d^N to be "long-run" period-d continuation costs conditional on $s_d = N$. With these definitions, we can work backward to solve for W_{d+1}.

On day d_3, a person with $s_{d_3} = Y$ will make a payment when

$$c_{d_3} + \beta\delta A_{d_3} \leq \beta\delta z^Y \qquad \text{or} \qquad c_{d_3} \leq \beta\delta \left[z^Y - A_{d_3}\right] \equiv \bar{c}_{d_3}.$$

Given $\bar{c}_{d_3}$,

$$\begin{aligned} W_{d_3}^Y &= F(\bar{c}_{d_3}) \left[E(c|c \leq \bar{c}_{d_3}) + \delta A_{d_3}\right] + (1 - F(\bar{c}_{d_3})) \left[\delta z^Y\right] \\ W_{d_3}^N &= \delta z^N. \end{aligned}$$

Then for any day $d < d_3$ we can derive behavior recursively using:

$$\begin{aligned} W_{d+1} &= \lambda^Y W_{d+1}^Y + (1-\lambda^Y) W_{d+1}^N \\ \bar{c}_d &= \beta\delta \left[W_{d+1} - A_d \right] \\ W_d^Y &= F(\bar{c}_d) \left[E(c | c \leq \bar{c}_d) + \delta A_d \right] + (1 - F(\bar{c}_d)) \delta W_{d+1} \\ W_d^N &= \delta \left[\lambda^N W_{d+1}^Y + (1-\lambda^N) W_{d+1}^N \right]. \end{aligned}$$

Finally, whereas $F(\bar{c}_d)$ is the probability that a person with $s_d = Y$ will make the payment on day d, we need a prediction for the probability a person will complete the task without knowing her current state. Let Λ_d^Y be the likelihood that a person who has not made a payment before day d has $s_d = Y$, where Λ_0^Y is exogenous. Then for all $d > 0$

$$\Lambda_d^Y = \frac{\Lambda_{d-1}^Y (1 - F(\bar{c}_{d-1})) \lambda^Y + (1 - \Lambda_{d-1}^Y) \lambda^N}{\Lambda_{d-1}^Y (1 - F(\bar{c}_{d-1})) + (1 - \Lambda_{d-1}^Y)}.$$

The unconditional (without knowing the person's state s_d) probability of making a payment on day d is $h_d \equiv \Lambda_d^Y F(\bar{c}_d)$—this is the analogue for the aggregate hazard rate in our data.

The general case: We now consider the general case in which the perceived expected continuation costs $\hat{W}_{d+1}$ might differ from actual expected continuation costs W_{d+1} due to either unawareness about present bias ($\hat{\beta} \neq \beta$) or unawareness about forgetting ($\hat{\lambda}^Y \neq \lambda^Y$ or $\hat{\lambda}^N \neq \lambda^N$). The analysis of the general case is analogous to the analysis for the fully-aware case except that we proceed in two steps: (i) we solve for perceived future behavior and perceived expected continuation costs using beliefs $\hat{\beta}$, $\hat{\lambda}^Y$, and $\hat{\lambda}^N$ instead of β, λ^Y, and λ^N; and (ii) given these perceived expected continuation costs, we solve for actual behavior in each period.

The first step is equivalent to above except that we use beliefs. Specifically, letting $\hat{c}_d$ denote the perceived future cutoff costs, the equations for $d = d_3$ become

$$\begin{aligned} \hat{c}_{d_3} &= \hat{\beta}\delta \left[z^Y - A_{d_3} \right] \\ \hat{W}_{d_3}^Y &= F(\hat{c}_{d_3}) \left[E(c | c \leq \hat{c}_{d_3}) + \delta A_{d_3} \right] + (1 - F(\hat{c}_{d_3})) \left[\delta z^Y \right] \\ \hat{W}_{d_3}^N &= \delta z^N \end{aligned}$$

and the equations for any $d < d_3$ become

$$\begin{aligned}
\hat{W}_{d+1} &= \hat{\lambda}^Y \hat{W}^Y_{d+1} + (1-\hat{\lambda}^Y)\hat{W}^N_{d+1} \\
\hat{c}_d &= \hat{\beta}\delta\left[\hat{W}_{d+1} - A_d\right] \\
\hat{W}^Y_d &= F(\hat{c}_d)\left[E(c|c \leq \hat{c}_d) + \delta A_d\right] + (1-F(\hat{c}_d))\delta\hat{W}_{d+1} \\
\hat{W}^N_d &= \delta\left[\hat{\lambda}^N \hat{W}^Y_{d+1} + (1-\hat{\lambda}^N)\hat{W}^N_{d+1}\right].
\end{aligned}$$

For the second step, given $\hat{W}_{d+1}$, a person with $s_d = Y$ will make the payment on day d when

$$c_d + \beta\delta A_d \leq \beta\delta\hat{W}_{d+1} \qquad \text{or} \qquad c_d \leq \beta\delta\left[\hat{W}_{d+1} - A_d\right] \equiv \bar{c}_d.$$

Hence, the probability that a person with $s_d = Y$ will make the payment on day d is $F(\bar{c}_d)$. Finally, the unconditional (without knowing the person's state s_d) probability of making a payment on day d is $h_d \equiv \Lambda^Y_d F(\bar{c}_d)$, where Λ^Y_d is defined exactly as above (using the actual λ^Y, λ^N, and $\bar{c}_d$'s because Λ^Y_d is tracking the actual proportion of the remaining population that has $s_d = Y$).

Numerical examples

We now present some numerical examples to illustrate the predictions of this model.

Assumptions used in all numerical examples: To (roughly) match the values faced by all individuals in our data, our examples all use $d_1 = 30$, $d_2 = 65$, $d_3 = 100$, $a_1 = \$10$, and $a_2 = \$20$. In addition, we always use $f = \$65$, although the value of f is not important as it affects behavior only if $\delta < 1$. In fact, our examples all assume $\delta = 1$, which is the natural assumption to make given that we are studying daily decisions.[2]

The cost distribution F has a major impact on predicted behavior, and yet there is no obvious assumption to make about the nature of this distribution. Below, we highlight how the resulting flexibility can lead to major identification issues, and we do so even while limiting attention to a simple two-parameter functional form $F(c) = v + c/w$, defined for $c \in [0, (1-v)w]$. As we illustrate below, this functional form is convenient because the two parameters capture two key aspects of the cost distribution: v captures the mass at (or, more generally, near) zero, which has a major impact on the level of hazard rates, and w captures the spread of possible costs, which plays a major role in determining the magnitude

[2] In particular, with exponential discounting, any reasonable yearly discounting implies a daily $\delta \approx 1$. For instance, even a rather impatient yearly exponential discount factor of 0.7 would imply a daily $\delta = (0.7)^{1/365} = 0.999$. Assuming $\delta < 1$ would not change any qualitative conclusions, and moreover the identification issue also applies to δ—that is, in practice one could not separately identify δ from the cost distribution.

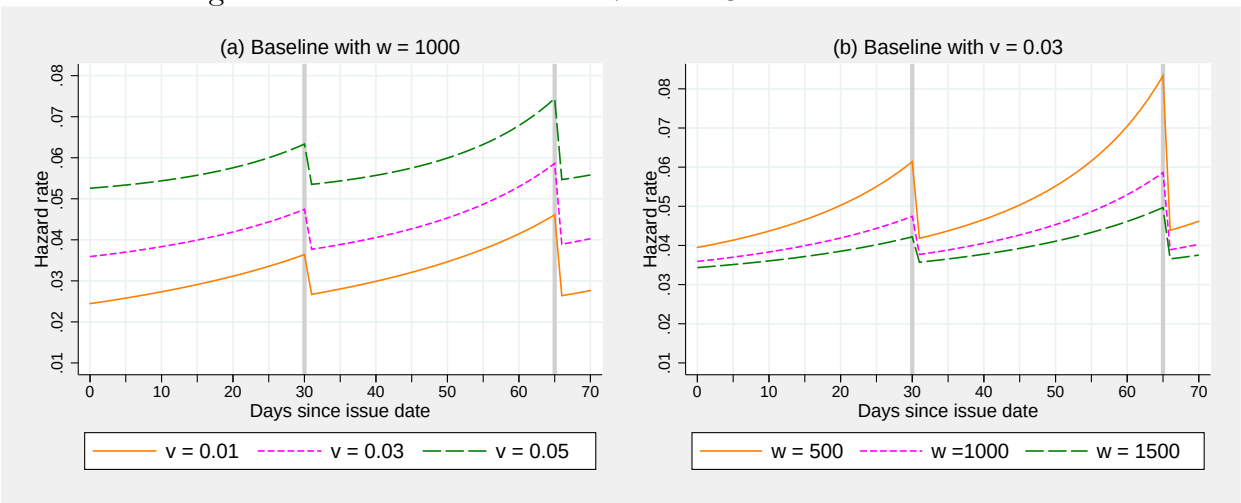
of the slope leading up to a deadline.

Finally, the examples below all assume endgame continuation costs $z^Y = z^N = 130$, which is equal to $f + a_1 + a_2 + a_3 + 5$. Assumptions about z^Y and z^N matter quite a bit for behavior near day $d_3 = 100$, but they matter less for earlier behavior. Rather than present examples for various z^Y and z^N, we instead focus on predicted behavior through day 70—that is, we focus on behavior through the second deadline.

Baseline model: Consider first the "Baseline" model in which there is no present bias ($\beta = 1$) and no forgetting ($\lambda^Y = \lambda^N = \Lambda_0^Y = 1$). For this case, we can apply known results from similar optimal-stopping problems (e.g., Bertsekas (2005)) to conclude that, for any F (not just the functional form above), the effort-cost cutoffs satisfy $\bar{c}_{d+1} > \bar{c}_d$ for all $d \notin \{d_1, d_2\}$ (as long as $F(\bar{c}_d) \in (0, 1)$). Intuitively, the person faces a trade-off: she would like to pay the ticket before the next deadline (to avoid the penalty), however, she would also like to find a convenient time. Well in advance of a deadline, it is safe to wait for a future low-cost day. As that deadline approaches, however, the incentive to pay rises. Once that deadline passes, the person is now focused on the subsequent deadline, and thus the incentive to pay might drop immediately after the deadline, but then it rises again toward the next deadline.

Figure A1 illustrates this behavior for several different combinations of v and w (the parameters of the cost distribution). Figure A1 illustrates how, as discussed above, v has a major impact on the level of hazard rates while w plays a major role in determining the magnitude of slope leading up to a deadline.

Figure A1: Baseline Model for Various Combinations of v and w



Impact of present bias and forgetting: We now study the impact of present bias and forgetting. We study two types of questions. First, starting with a specific (fully parametrized) Baseline model, ceteris paribus what is the impact of introducing present bias or forgetting (with specific assumptions about awareness)? The answer to this question illustrates the direct impact of each mechanism. Second, after introducing present bias or forgetting (with specific assumptions about awareness), how close can predicted hazard rates come to the Baseline hazard rates if we permit ourselves to adjust v and w? The answer to the second question reveals the extent to which we would be able to separately identify the mechanism from the effort-cost distribution.

The second question requires a metric for closeness. We minimize the sum of squared differences of daily hazard rates over days 0 through 70. In other words, if h_d^{base} is the day-d hazard rate under the Baseline model and h_d^{new} is the day-d hazard rate under the model with present bias or forgetting, then we choose v and w to minimize[3]

$$\sum_{d=0}^{70} \left(h_d^{new} - h_d^{base}\right)^2.$$

Figure 2 in the main text illustrates the answers to these questions using a Baseline model with $v = 0.015$ and $w = 1750$, and studying (a) naive present bias with $\beta = 0.8$, (b) sophisticated present bias with $\beta = 0.8$, (c) forgetting with full unawareness with $\lambda^Y = 0.98$, $\lambda^N = 0.05$, and $\Lambda_0^Y = 0.7$, and (d) forgetting with full awareness with $\lambda^Y = 0.98$, $\lambda^N = 0.05$, and $\Lambda_0^Y = 0.7$. In each panel, the solid orange line reflects the Baseline model, the short-dashed pink line reflects the answer to the first question, and the long-dashed green line reflects the answer to the second question.

To further illustrate the predictions of the model, Figure A2 consider several additional examples:

Panels (a) and (b) consider the same Baseline model as in Figure 2, but consider a forgetting model with more rapid changes in the state—specifically, with $\lambda^Y = 0.8$, $\lambda^N = 0.2$, and $\Lambda_0^Y = 0.7$.[4] These panels illustrate how, with more rapid forgetting, there can be zones far from deadlines where hazard rates decline over time due to tickets rapidly falling off people's minds. In such cases, the adjusted model cannot match the Baseline model in those zones. In principle, one could perhaps use such zones for identification. However, such zones could also arise from unobserved heterogeneity, which complicates identification. Moreover, if we do not observe such zones, as we do not in our data, then we are back to the conclusion

[3] We use a grid-search approach where the grid has a step size of .001 for v and 5 for w.

[4] The adjusted cost parameters are $v = .043$ and $w = 660$ in panel (a), and $v = .022$ and $w = 665$ in panel (b).

that in practice one cannot separately identify forgetting from the parameters of the cost distribution.

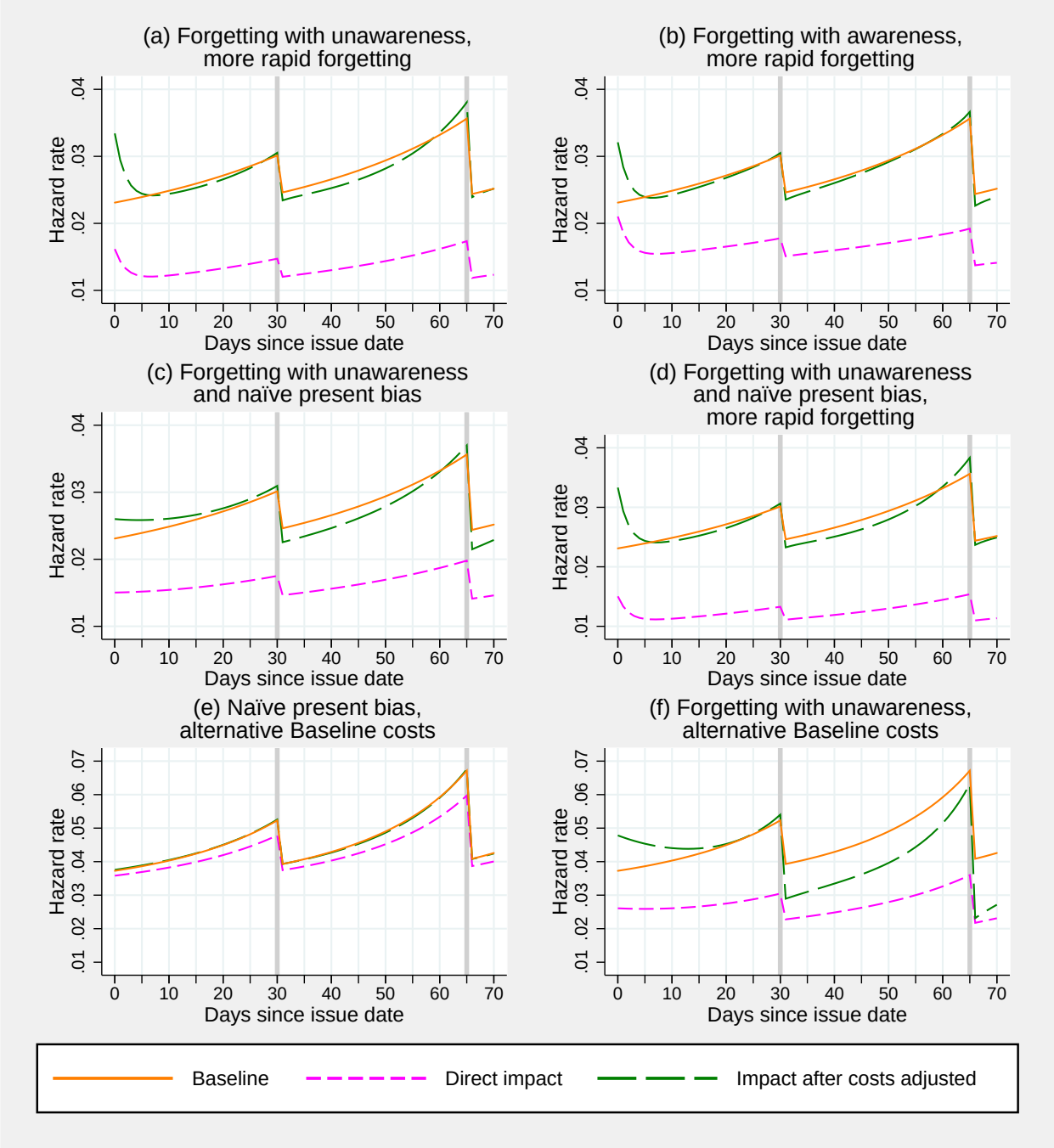
Panels (c) and (d) also consider the same Baseline model as in Figure 2, but consider a model that combines naive present bias (with $\beta = 0.8$) and forgetting with unawareness with either slow ($\lambda^Y = 0.98$, $\lambda^N = 0.05$, $\Lambda_0^Y = 0.7$) or rapid ($\lambda^Y = 0.8$, $\lambda^N = 0.2$, $\Lambda_0^Y = 0.7$) forgetting.[5] Each panel looks qualitatively the same as the associated panel with only forgetting with unawareness, further highlighting that present bias is especially difficult to identify in this domain. This latter finding is consistent with parallel work by Heidhues and Strack (2019). As discussed in Section 2, they independently provide a similar though more stylized example, and then formally prove in the context of a single deadline and a fully flexible cost distribution that present bias and the cost distribution cannot be separately identified.

Panels (e) and (f) consider a Baseline model with different cost parameters ($v = 0.03$ and $w = 750$) that yield more rapidly increasing hazard rates. Panel (e) then studies the impact of naive present bias while panel (f) studies the impact of forgetting with unawareness, in both cases using the same parameters as in Figure 2.[6] Our conclusion that, in practice, it would be difficult to separately identify these mechanisms from the cost distribution continues to hold.

[5] The adjusted cost parameters are $v = .03$ and $w = 550$ in panel (c), and $v = .043$ and $w = 510$ in panel (d).

[6] The adjusted cost parameters are $v = .031$ and $w = 590$ in panel (e), and $v = .062$ and $w = 175$ in panel (f).

Figure A2: Hazard Rates Predicted by Model for Additional Parameter Values



1.2 Behavior with reminders

We next introduce reminder letters into the model. Specifically, we assume that if a reminder letter is received on day d_R, then for those for whom the ticket is off the mind at the start of day d_R, proportion ϕ of them have the ticket put back on the mind on day d_R. Because such reminder letters impact behavior only under the model of forgetting, everything in this subsection assumes such forgetting.

Deriving an individual's behavior

Relative to the general case described above, the introduction of a reminder letter on day d_R requires three changes.

First, we use

$$\hat{W}_{d_R} = \hat{\lambda}^Y \hat{W}^Y_{d_R} + (1 - \hat{\lambda}^Y) \left[(1-\phi)\hat{W}^N_{d_R} + \phi \hat{W}^Y_{d_R} \right]$$

to reflect that the person predicts on day $d_R - 1$ (and all prior periods) that if the ticket falls off the mind between day $d_R - 1$ and day d_R, there is still a probability ϕ that it would be put right back on the mind by the letter.

Second, we use

$$\hat{W}^N_{d_R-1} = \delta \left[\hat{\lambda}^N \hat{W}^Y_{d_R} + (1 - \hat{\lambda}^N) \left[(1-\phi)\hat{W}^N_{d_R} + \phi \hat{W}^Y_{d_R} \right] \right]$$

to reflect that the person predicts on day $d_R - 2$ (and all prior periods) that if the ticket is off the mind on day $d_R - 1$ and remains off the mind entering day d_R, there is still a probability ϕ that it would be put back on the mind by the letter.[7]

Third, we use $\Lambda^Y_{d_R} = \tilde{\Lambda}^Y_{d_R} + \phi(1 - \tilde{\Lambda}^Y_{d_R})$ where

$$\tilde{\Lambda}^Y_{d_R} = \frac{\Lambda^Y_{d_R-1}(1 - F(\bar{c}_{d_R-1}))\lambda^Y + (1 - \Lambda^Y_{d_R-1})\lambda^N}{\Lambda^Y_{d_R-1}(1 - F(\bar{c}_{d_R-1})) + (1 - \Lambda^Y_{d_R-1})}.$$

This change makes sure we appropriately track the actual proportion of the remaining population that has $s_{d_R} = Y$ after receiving the letter, where $\tilde{\Lambda}^Y_{d_R}$ is the actual proportion of the remaining population that has the ticket on the mind entering day d_R prior to receiving the letter.

[7] Formally, the first two changes assume for simplicity that everyone—including people not fully aware of their propensity to forget—fully understand the impact of the letter on those for whom the ticket is off the mind. Our examples below assume either complete awareness of forgetting, in which case this is arguably the right assumption, or complete unawareness of forgetting, in which case what one assumes in this dimension is irrelevant (because $1 - \hat{\lambda}^Y = 1 - \hat{\lambda}^N = 0$).

Numerical examples

Figure 3a in the main text depicts predicted hazard rates for receiving a reminder letter on day $d_R = 20$ versus on day $d_R = 40$, using the parameters for forgetting with unawareness as in Figure 2c, assuming $\phi = 0.5$, and using the cost parameters $v = 0.029$ and $w = 700$ selected for the Impact-after-costs-adjusted line in Figure 2c.

Figure 3b depicts the ratio of the predicted hazard rate given a day-20 letter divided by the predicted hazard rate given a day-40 letter. Under the model of forgetting with full unawareness, this ratio corresponds to the ratio of the proportion of people with the ticket on the mind given a day-20 letter divided by the proportion of people with the ticket on the mind given a day-40 letter. To see this, let $\bar{c}_d(d_R)$, $\Lambda_d^Y(d_R)$, and $h_d(d_R)$ denote the day-d cutoff cost, proportion with the ticket on the mind, and aggregate hazard rate in a regime with a reminder letter on day d_R. Because in general $h_d \equiv \Lambda_d^Y F(\bar{c}_d)$, it follows that

$$\frac{h_d(20)}{h_d(40)} = \frac{\Lambda_d^Y(20)F(\bar{c}_d(20))}{\Lambda_d^Y(40)F(\bar{c}_d(40))}.$$

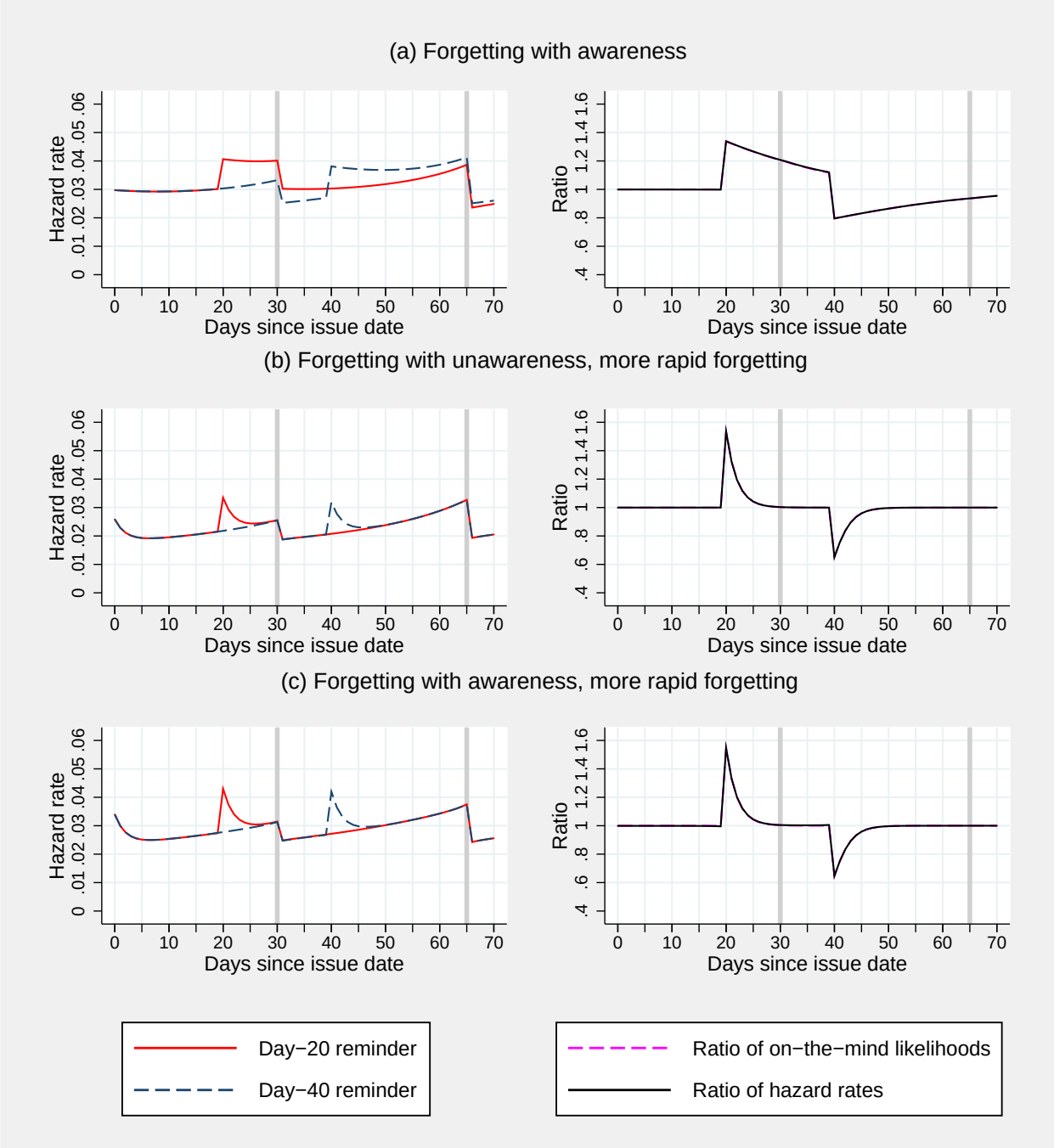
Under full unawareness of forgetting, $\bar{c}_d(d_R)$ is independent of d_R because the person believes the ticket will be on the mind on all future days no matter what. Hence, $\bar{c}_d(40) = \bar{c}_d(20)$ for all d, and thus $h_d(20)/h_d(40) = \Lambda_d^Y(20)/\Lambda_d^Y(40)$ for all d.

While not presented in the main text, the qualitative impact of reminder letters is much the same under full awareness about forgetting. To illustrate, the left-hand-side of Figure A3a depicts predicted hazard rates for receiving a reminder letter on day $d_R = 20$ versus on day $d_R = 40$, using the parameters for forgetting and the cost parameters as in Figure 3, but assuming full awareness about forgetting. The qualitative pattern is much the same as in Figure 3a.

Unlike under full unawareness, under full awareness it is not necessarily the case that $\bar{c}_d(40) = \bar{c}_d(20)$ because a person typically adjusts behavior today in reaction to anticipated future forgetting, and thus it is not necessarily the case that $h_d(20)/h_d(40) = \Lambda_d^Y(20)/\Lambda_d^Y(40)$. Nonetheless, the right-hand-side of Figure A3a demonstrates that, while $h_d(20)/h_d(40) \neq \Lambda_d^Y(20)/\Lambda_d^Y(40)$, these ratios are approximately the same, so much so that there is no noticeable difference in Figure A3a. This figure illustrates that, even under full awareness, $h_d(20)/h_d(40)$ might still be a good proxy for $\Lambda_d^Y(20)/\Lambda_d^Y(40)$ because adjustments to behavior today in reaction to anticipated future forgetting can be small.

Finally, Figures A3b and A3c illustrate that a similar qualitative message holds under forgetting parameters that imply more rapid forgetting ($\lambda^Y = 0.8$, $\lambda^N = 0.2$, $\Lambda_0^Y = 0.7$).

Figure A3: Predicted Impact of Day-20 Versus Day-40 Reminder Letter



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2 Data and Context

In this appendix, we describe our datasets, including the variables that we use in our analysis. We also describe some additional details about our context.

Description of Datasets

Our data analysis begins with three *raw datasets*, which we merge and clean to create the *full dataset*, which in turn we restrict to obtain the *passenger dataset*, and restrict further to obtain the *core dataset* that we analyze in the paper. Here, we describe each of these datasets, and the process of merging, cleaning, and imposing some restrictions (some further details are collected into Appendix 11).

We begin with three raw datasets that we received from DOF: a *summonses database*, an *events database*, and a *vendor database*.[8]

The *summonses database* contains information on (virtually) all summonses ("tickets") issued for city parking violations in New York City between May 1, 2011 and mid-January 2014.[9] For each summons, the database contains almost a hundred variables. In our analysis, we use the following variables:

- Summons number
- Issue date
- Date summons entered into system
- Violation type
- Fine amount
- Issuing agency
- License plate
- Indicators for vehicle type (passenger, non-passenger, rental, fleet)
- Address verification level (reflects confidence that the recipient's address on file is correct)

The *events database* contains information on all "events" associated with any summons, where an event is either an action taken by the ticket recipient (e.g., making a payment or contesting the ticket) or by DOF (e.g., imposing a late penalty or sending a notification letter). In our analysis, we use the following variables:

[8] These databases were in fact created by merging multiple data dumps and deleting duplicate summonses or events that appear in multiple data dumps. For details, see Appendix 11.

[9] We are missing summonses from February 27-28, 2013, most likely due to a data dump issue—one data file covered few summonses issued after February 26, 2013, and the next data file covered summonses starting on March 1, 2013. These missing days are unlikely to create any bias.

- Summons number
- Event date
- Date event entered into system
- Event type[10] (more detailed information to come below)

The *vendor database* contains additional information about the summonses that were issued during the experimental period of July 13, 2013 through August 16, 2013.[11] In our analysis, we use the following variables:

- Summons number
- Whether and which version of a NEW letter 1 is sent
- Whether an EXP letter 1.5 is sent
- Exact address of ticket recipient

We merge the three raw datasets using the summons number, and perform a number of cleaning operations. Specifically, we drop summonses with an obviously wrong issue date (i.e., in the future relative to when the data dump was generated), and we drop events that are not matched to any summons in the summonses database. We further keep a summons only if its issue date is between June 1, 2011 and August 31, 2013 and it has at least one event between June 1, 2011 and January 31, 2014.[12] We are left with 20,874,688 summonses and their 58,754,456 events, which we refer to as the *full dataset*.

In the *full dataset*, we create some additional variables:

- *Regime*: This variable takes on three values depending on whether the summons was issued during the OLD regime (June 1, 2011 through June 18, 2012), the NEW regime (June 19, 2012 through July 12, 2013 or August 17, 2013 through August 31, 2013), or the EXP regime (July 13, 2013 through August 16, 2013).

- *Issue day of week*: We convert issue date (a calendar date) into a day of the week.

- *Payment date*: This variable indicates the date of the first payment received of any form (most of these are payments in full, but some are partial payments). Note that this need not be the first response for a driver, because the first payment could come after a contest or settlement event.

[10] Event type is constructed by combining multiple variables that together specify the event type. For details, see Appendix 11.

[11] The vendor database was in fact assembled from a collection of files that contain this information.

[12] The latter eliminates very few summonses (0.05% of summonses issued between June 1, 2011 and August 31, 2013), and in principle should not occur because it would mean that late penalties are not being imposed and notification letters are not being sent (because those would be events).

- *Payment type*: This variable indicates the method of the first payment, which could be by mail (using a check or money order); online (using a credit or debit card); by phone (using a credit or debit card); in person (using check, money order, cash, credit card, or debit card) at one of five DOF Business Centers (one in each borough);[13] or unknown.[14]

- *First response date*: This variable indicates the date of the first response of any type.

- *First response type*: This variable indicates the form of the first response, and can take on three values: payment, contest, or settlement.[15]

  - Note that a settlement must occur after a contest, and thus in principle is a subset of contest. But we include it as a separate category so that we can check that the ending of the settlement program is not meaningfully affecting our results.

  - Note that contests are not recorded as events in the system that generates our data (they are tracked by another system, to which we have no access). But contests trigger other events, and those are recorded in our data. As a result, we identify contest events using a set of criteria, e.g., penalty holds that are triggered by contests, or dispositions which are outcomes of contests—for details, see Appendix 11. Many of these contest events are entered on the day the contest is made, but in some cases it might be that we are capturing contests a few days after they occur.

  - Note that many summonses involve multiple responses on the first response date—e.g., as described above, a person might contest, accept a settlement, and pay all on the same day. Given our knowledge of the institutional structure, in such cases, we classify first responses as follows: (1) If there is a settlement on the first response date, we classify the first response as settlement; (2) if there is no settlement but there is a contest event on the first response date, we classify the first response as contest; and (3) if the only event on the first response date is a payment, we classify the first response as payment.

[13] Prior to 2013, all credit and debit card payments were assessed a $2 nonrefundable fee. Starting in 2013, the fee changed to 2.49% of the amount paid.

[14] Each of these actually reflects a collection of payment codes. There are two payment codes that we could not type—hence the category unknown—but these codes have a tiny number of instances. For details, see Appendix 11.

[15] Settlements arise from the settlement program described below. Each of these response types actually reflects a collection of event codes—for details, see Appendix 11.

- *Tow/boot response versus non-tow/boot response*: This binary variable indicates whether or not a response comes after the ticketed vehicle has been towed or booted.[16]

Starting with the full dataset, we restrict our data in a variety of ways. First, because payment considerations are different for firms, we drop summonses issued to non-passenger vehicles (27.8% of summonses) or to vehicles that are part of a rental car or fleet program (20.5% of summonses), resulting in a combined drop of 32.4% of summonses.[17] Second, of the remaining 14,113,430 summonses, we keep only summonses that can be reasonably classified as parking violations. In particular, we exclude two *moving* violations (red-light and bus-lane violations caught with stationary cameras, which fall under the purview of DOF), and several non-moving, non-parking violations (e.g., expired registration).[18] We also drop tickets issued for violations that occur fewer than 600 times in the data. We exclude the moving violations because they involve an entirely different schedule of deadlines and notifications, and we exclude the non-parking and the outlier parking violations in case response behavior for some of them is different from typical response behavior. These restrictions leave us with 11,139,375 summonses, which we refer to as the *passenger dataset*.

Finally, we move from the passenger dataset to the *core dataset* by imposing a few further restrictions. First, we keep only the 6,801,115 summonses (61.05% of summonses in the passenger dataset) where the address has the highest verification level (which DOF codes as verification level "A"). Of these, only 173 summonses are issued to vehicles without NY-state license plates, and we exclude those 173 summonses. Of the remaining (NY-state-only, highest-verification-level) sample, we keep only the 6,730,378 summonses issued for one of the 23 most common parking violations. Finally, of those, we keep only the 6,646,540 summonses that are issued by New York City parking ticket agents or by the New York City Police Department. This is the *core dataset*. Its 6,646,540 summonses have between them 20,584,563 events.

Table A1 presents descriptive statistics for both the passenger dataset and the core dataset. Tables A2 and A3 present summonses per plate for the entire core dataset and for each regime, respectively.

Additional details about our context

In Section 3.2, we describe deadlines and penalties as they are presented to plate owners. In practice, they were implemented in a slightly different way, as we describe here.

[16] See Appendix 11 for details of how this variable is constructed.

[17] For summonses issued to vehicles that are part of a rental car or fleet program, a bill is sent to the firm that owns the vehicles.

[18] The largest categories that are dropped are lack of a current inspection or registration sticker (7.9% of the full dataset) and red-light violations (7.2% of the full dataset).

While the stated first deadline is day 30, in practice DOF's computer system runs a batch job every Saturday, and assigns a $10 late penalty to any outstanding ticket for which the due date passed during the preceding week ending on Thursday. Hence, in principle there is a short grace period after day 30, where the length of this grace period depends on the day on which the ticket is issued. Since the existence of this grace period is the same across regimes, it should not impact our comparison of regimes. The same batch process is used to generate OLD letter 1—that is, for any ticket that is assigned the $10 late penalty, DOF also mails a notification letter to the plate owner (OLD letter 1) on the subsequent Tuesday (which would be day 35–41).

DOF uses a similar batch job following the second and third deadlines. Specifically, each Saturday a batch job assigns a $20 late penalty to any outstanding ticket for which the second deadline passed on the preceding Monday (which was day 62-68), and triggers a second notification letter (letter 2) being sent on the subsequent Tuesday (day 70–76). Analogously, each Saturday a batch job assigns a $30 late penalty to any outstanding ticket for which the third deadline passed on the day before (which was day 101-107), and triggers a third notification letter (letter 3) being sent on the subsequent Tuesday (day 105-111).

It is also worth noting that the letters use progressively stronger language regarding actions that might be taken following a default judgment entry. The original ticket/envelope mention merely that the vehicle may be towed. OLD letter 1 states that enforcement actions include garnisheeing the owner's wages, towing the owner's vehicles, and preventing renewal of motor vehicle registrations. Letter 2 further adds making the owner's debt a matter of public record and seizing assets including real estate and bank accounts. Finally, Letter 3 includes the same consequences expressed more forcefully. While we cannot directly test the impact of this progressively stronger language, the fact that our *scary* treatment in the EXP regime has little impact suggests that it might not have mattered much.

In addition to the change in when the first letter is sent, there are two idiosyncratic differences between the OLD and the NEW regime. First, prior to February 1, 2012—and thus under only the OLD regime—DOF had a settlement program in which, if an owner initiated a contest, the owner was automatically offered a fine reduction if they accepted a settlement instead of continuing with the contest. The offered fine reduction varied by ticket type, ranging from $10 to $25. This program was abolished because DOF had come to believe that drivers were gaming the program. In Appendices 3 and 4.2, we demonstrate that the existence of this program has little impact on our main results.

Second, Hurricane Sandy hit in the last few days of October 2012—during the NEW regime. Figure A4 presents the distribution of summonses by issue date, and there was a major drop in tickets issued during and after the hurricane. We suspect there was also a cor-

responding drop in enforcement around the same time that might influence response behavior on tickets issued in the weeks prior to Hurricane Sandy. In Appendix 4.2, we demonstrate that our main results are robust to dropping summonses issued around Hurricane Sandy.

Table A1: Descriptive Statistics for Passenger Dataset and Core Dataset

	Core Dataset		Passenger Dataset	
	Number	**% of Total**	**Number**	**% of Total**
Total # of Tickets	6,646,540	--------	11,139,375	--------
Violation Type				
Expired Meter	2,408,092	36.23%	3,343,908	30.02%
Muni Meter No Receipt (38)	967,878	14.56%	1,430,348	12.84%
Muni Meter in Excess of Time (37)	737,070	11.09%	1,012,460	9.09%
Expired Meter (34)	703,144	10.58%	901,100	8.09%
Street Cleaning (21)	1,739,967	26.18%	2,672,002	23.99%
General No Parking Zone (20)	612,288	9.21%	996,310	8.94%
General No Standing Zone (14)	445,169	6.70%	867,941	7.79%
Fire Hydrant (40)	371,330	5.59%	706,774	6.34%
Double Parking (46)	315,493	4.75%	609,823	5.47%
Bus Stop (19)	159,219	2.40%	359,005	3.22%
Truck Loading / Unloading (16)	143,930	2.17%	263,139	2.36%
Authorized Vehicles Only	128,804	1.94%	244,264	2.19%
Authorized Vehicles Only / No Standing (17)	100,720	1.52%	180,858	1.62%
Authorized Vehicles Only / No Parking (24)	28,084	0.42%	63,406	0.57%
In Commercial Zone (31)	89,973	1.35%	196,495	1.76%
In Crosswalk (50)	67,881	1.02%	111,817	1.00%
On Sidewalk (51)	45,445	0.68%	82,123	0.74%
Parking Longer than Limit (39)	24,701	0.37%	33,270	0.30%
In a Driveway (98)	19,885	0.30%	66,204	0.59%
Not as Marked (68)	15,406	0.23%	24,503	0.22%
In a Pedestrian Ramp (67)	14,900	0.22%	56,563	0.51%
In a Safety Zone (53)	14,449	0.22%	25,202	0.23%
In a Bike Lane (48)	11,407	0.17%	30,223	0.27%
No Standing / Taxi Stand (13)	9,352	0.14%	18,820	0.17%
In Handicapped Zone (27)	8,849	0.13%	22,853	0.21%
Parking Trailor without Car (66)			46,942	0.42%
No Meter Receipt, Commercial Zone (69)			46,197	0.41%
Comm. Vehicle on Res. Street at Night (78)			35,572	0.32%
Not Close to Curb in Midtown Manhattan (47)			28,897	0.26%
Blocking an Intersection (9)			28,390	0.25%
In Bus Lane (18)			26,040	0.23%
Comm. Vehicle with Platform Down (84)			24,176	0.22%
Not Parallel to Curb (61)			20,949	0.19%
In a Traffic Lane (45)			15,508	0.14%
Parking a Bus Where Not Allowed (77)			14,941	0.13%
Comm. Vehicle for >3 Hours (85)			14,589	0.13%
In No Stopping Zone (10)			14,343	0.13%
Expired Muni Meter, Comm. Zone (42)			13,191	0.12%
Parking Comm. Vehicle with Rear Seats (82)			12,961	0.12%

	Core Dataset		Passenger Dataset	
	Number	**% of Total**	**Number**	**% of Total**
No Standing except Consul/Diplomat (64)			11,686	0.10%
Parking at an Angle (60)			11,275	0.10%
At Broken Meter for Longer than Limit (32)			9,737	0.09%
Parking Outside Space Markings (62)			9,503	0.09%
Violation Tow Program (94)			4,732	0.04%
Parking to Sell Vehicle by Regular Seller (91)			4,337	0.04%
Hotel Loading / Unloading Zone (11)			3,775	0.03%
By Street Construction (49)			3,018	0.03%
In an Intersection (52)			2,050	0.02%
In a Park at Night (63)			1,746	0.02%
No Parking / Taxi Stand (23)			1,606	0.01%
Along a Barrier or Divided Highway (56)			991	0.01%
In Garment District during the Day (89)			984	0.01%
<u>Ticket Amount</u>				
$35	2,001,176	30.11%	2,648,755	23.78%
$45	1,587,981	23.89%	2,497,212	22.42%
$55	797	0.01%	5,879	0.05%
$60	545,340	8.20%	852,939	7.66%
$65	694,463	10.45%	1,390,572	12.48%
$95	263,727	3.97%	521,635	4.68%
$100	2	0.00%	4,433	0.04%
$115	1,528,937	23.00%	3,135,822	28.15%
$165	14,890	0.22%	56,508	0.51%
$180	8,832	0.13%	22,749	0.20%
Other/Missing	395	0.01%	2,871	0.03%
<u>Ticket Issuer</u>				
Parking-Ticket Agent	6,457,522	97.16%	9,781,791	87.81%
New York City Police Department	189,018	2.84%	955,970	8.58%
Other (18 codes)			401,614	3.61%
<u>Plate State</u>				
NY	6,646,540	100.00%	7,749,050	69.56%
NJ			1,312,686	11.78%
PA			441,073	3.96%
FL			223,140	2.00%
CT			213,301	1.91%
MA			117,569	1.06%
VA			113,996	1.02%
NC			104,024	0.93%
MD			95,065	0.85%
GA			67,635	0.61%
IL			50,403	0.45%

	Core Dataset		Passenger Dataset	
	Number	**% of Total**	**Number**	**% of Total**
ME			45,133	0.41%
OH			44,447	0.40%
CA			43,993	0.39%
Other/missing			517,860	4.65%

Payment Type	Number	% of Payments	Number	% of Payments
Payment made by Day 135	5,333,147	--------	7,967,049	--------
Mail	1,724,697	32.34%	2,569,546	32.25%
Online	2,870,022	53.81%	4,302,523	54.00%
Phone	147,044	2.76%	225,563	2.83%
In Person	591,291	11.09%	868,133	10.90%
Unknown	93	0.00%	1,284	0.02%

Table A2: Summonses Per Plate in the Core Dataset

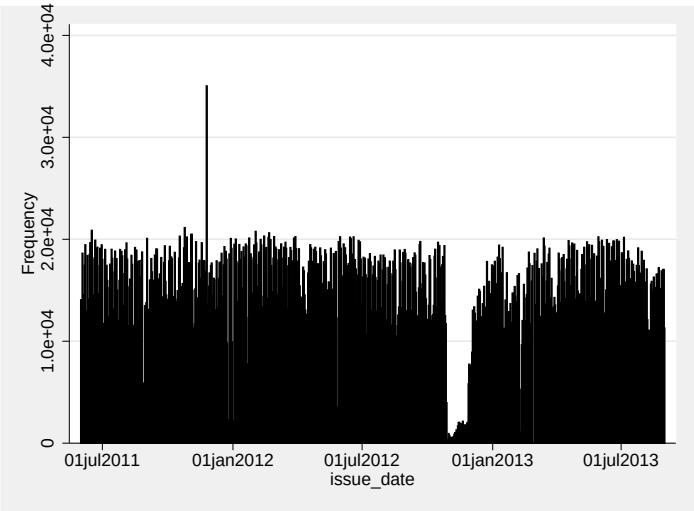
Summonses Per Plate	Number of Plates	% of Total	Cumulative
1	842,462	42.53%	42.53%
2	384,333	19.40%	61.94%
3	219,788	11.10%	73.03%
4	139,634	7.05%	80.08%
5	94,464	4.77%	84.85%
6	66,394	3.35%	88.21%
7	47,897	2.42%	90.62%
8	35,960	1.82%	92.44%
9	27,246	1.38%	93.81%
10	20,854	1.05%	94.87%
11	16,460	0.83%	95.70%
12	13,009	0.66%	96.35%
13	10,560	0.53%	96.89%
14	8,638	0.44%	97.32%
15	7,236	0.37%	97.69%
16	5,806	0.29%	97.98%
17	4,957	0.25%	98.23%
18	4,263	0.22%	98.45%
19	3,536	0.18%	98.63%
20	3,027	0.15%	98.78%
21	2,580	0.13%	98.91%
22	2,280	0.12%	99.02%
23	1,956	0.10%	99.12%
24	1,707	0.09%	99.21%
25	1,520	0.08%	99.29%
26	1,283	0.06%	99.35%
27	1,117	0.06%	99.41%
28	1,019	0.05%	99.46%
29	965	0.05%	99.51%
30	780	0.04%	99.55%
>30	8,967	0.45%	100.00%
Unique Plates	1,980,698		

Table A3: Summonses Per Plate in Each Regime

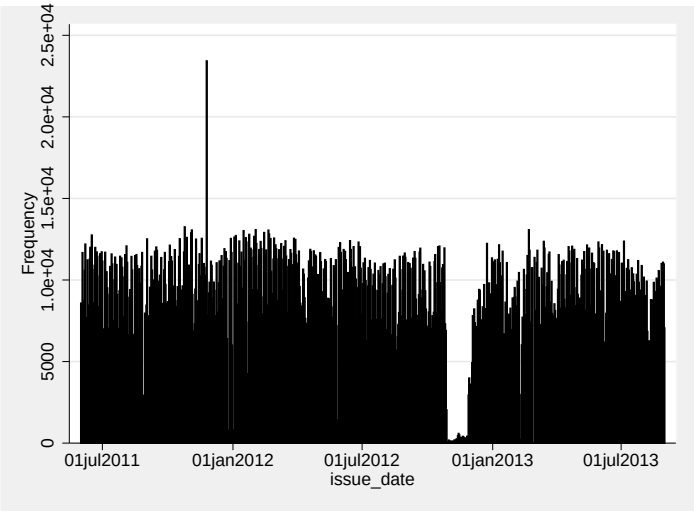
	OLD		NEW		EXP	
Summonses Per Plate	Number of Plates	% of Total	Number of Plates	% of Total	Number of Plates	% of Total
1	662,206	50.28%	644,122	52.04%	178,837	82.65%
2	269,304	20.45%	252,659	20.41%	27,408	12.67%
3	137,895	10.47%	125,570	10.15%	6,534	3.02%
4	79,363	6.03%	70,726	5.71%	2,055	0.95%
5	49,129	3.73%	42,944	3.47%	767	0.35%
6	31,728	2.41%	27,550	2.23%	357	0.16%
7	21,531	1.63%	18,554	1.50%	164	0.08%
8	14,970	1.14%	12,902	1.04%	102	0.05%
9	11,044	0.84%	9,453	0.76%	50	0.02%
10	8,039	0.61%	6,764	0.55%	25	0.01%
11	6,083	0.46%	5,011	0.40%	29	0.01%
12	4,553	0.35%	3,902	0.32%	15	0.01%
13	3,558	0.27%	3,057	0.25%	6	0.00%
14	2,925	0.22%	2,337	0.19%	2	0.00%
15	2,221	0.17%	1,865	0.15%	5	0.00%
16	1,854	0.14%	1,493	0.12%	6	0.00%
17	1,463	0.11%	1,264	0.10%	3	0.00%
18	1,247	0.09%	1,045	0.08%	1	0.00%
19	1,017	0.08%	841	0.07%	0	0.00%
20	876	0.07%	682	0.06%	0	0.00%
21	708	0.05%	610	0.05%	0	0.00%
22	641	0.05%	501	0.04%	2	0.00%
23	523	0.04%	452	0.04%	0	0.00%
24	477	0.04%	358	0.03%	0	0.00%
25	411	0.03%	343	0.03%	0	0.00%
26	343	0.03%	324	0.03%	1	0.00%
27	289	0.02%	242	0.02%	0	0.00%
28	258	0.02%	225	0.02%	1	0.00%
29	218	0.02%	167	0.01%	0	0.00%
30	189	0.01%	150	0.01%	1	0.00%
>30	1,876	0.14%	1,565	0.13%	0	0.00%
Unique Plates	1,316,939	100.00%	1,237,678	100.00%	216,371	100.00%
Unique plates in Core Dataset					1,980,698	
Unique Plates with Tickets in Both OLD and NEW					621,021	31.35%
Unique Plates with Tickets in Both OLD and EXP					106,614	5.38%
Unique Plates with Tickets in Both NEW and EXP					152,498	7.70%
Unique Plates with Tickets in OLD, NEW, and EXP					89,843	4.54%

Figure A4: Distribution of Summonses by Issue Date

(a) Passenger Dataset



(b) Core Dataset



3 The Nature of First Responses

Plate owners in our context face a two-dimensional decision: they choose not only *when* to respond to a ticket, but also *how* to respond—they can pay or contest. The main text focuses on the *when* question—that is, we study the timing of first responses of any type, pooling together payments and contests. In this appendix, we describe the nature of first responses, and in particular we provide the rationale behind this approach, along with descriptive statistics for type of first response

Table A4 describes the when and how of first responses. As in the main text, timing is measured in days since issue date and can take values from 0 to 135, or a no-response indicator if no response is observed by day 135. First response can be a payment (including partial) or a contest, whichever happens sooner.[19] We count settlements through the settlement program—described in Appendix 2—as a contest. The top section of the table shows the distribution of first responses for all tickets.

The cumulative response rate through day 135 is roughly the same across the OLD, NEW, and EXP regimes—90.1%, 89.3%, and 89.5%. However, there are differences in the type of first response, with more contests and fewer payments in the OLD regime than in the NEW and EXP regimes. This difference is primarily due to the elimination of the settlement program on February 1, 2012. To show this, Table A4 also presents first responses for the subset of tickets under the OLD regime that were issued on February 1, 2012 or later, which we label the *OLD-post* regime. The composition of first responses is similar under the OLD-post, NEW, and EXP regimes.

Our analysis of first responses pooled across response types creates two potential worries that Table A4 helps to alleviate. First, within a regime, we may be missing interesting patterns in the type of response over time. Second, and more important, when comparing regimes, we may be focusing on the wrong question—the timing question—if the primary impact of the regime change is on the type of first response. Our sense is that the regime changes are unlikely to have much impact on the type of first response, and indeed we see no evidence of this in the data. Specifically, the bottom panel of Table A4 reports first-response behavior across different time intervals as well as the composition of first responses within an interval. The regimes clearly differ in the timing of pooled first responses—i.e., the NEW and EXP regimes have more first responses prior to deadline 1 than the OLD regime, and fewer first responses between deadlines 1 and 2. This is the pattern highlighted in Figure 1 that we explore in detail in Section 4. However, the data exhibit two additional features

[19] The number of payments by day 135 differs in Tables A1 and A4 because the former reflects all payments by day 135 while the latter only reflects payments that are also a first response.

that together alleviate our concerns above. First, the timing of *pooled* first responses in the OLD-post regime is roughly the same as that in the OLD regime, and thus the elimination of the settlement program appears to have altered the type of first response without altering the timing of pooled first responses. Second, the within-interval *composition* of first responses in the OLD-post regime is roughly the same as that in the NEW and EXP regimes, especially prior to deadline 2, and thus the regime shifts from OLD-post to NEW to EXP appear not to have altered much the type of first response.

Table A4: Summary Statistics for First Responses

	OLD Regime		OLD-post Regime		NEW Regime		EXP Regime	
Total # of Tickets	3,355,094		1,240,286		3,020,357		271,089	
Payments by Day 135	61.7%		69.9%		70.8%		70.3%	
Contests by Day 135	28.4%		19.3%		18.5%		19.2%	
Regular Contests by Day 135	16.6%		19.3%		18.5%		19.2%	
Settlements by Day 135	11.8%		0.0%		0.0%		0.0%	
No Response by Day 135	9.9%		10.8%		10.7%		10.5%	
	% of Total	% of Interval	% of Total	% of Interval	% of Total	% of Interval	% of Total	% of Interval
Prior to Deadline 1	53.1%	--------	52.7%	--------	56.2%	--------	55.9%	--------
Payments	36.0%	67.7%	41.1%	77.9%	44.6%	79.4%	43.8%	78.4%
Contests	17.1%	32.3%	11.7%	22.1%	11.6%	20.6%	12.1%	21.6%
Between Deadlines 1 & 2	22.9%	--------	22.6%	--------	19.6%	--------	20.3%	--------
Payments	16.1%	70.2%	18.3%	80.8%	16.0%	81.5%	16.5%	81.5%
Contests	6.8%	29.8%	4.4%	19.2%	3.6%	18.5%	3.7%	18.5%
Between Deadlines 2 & 3	8.8%	--------	8.4%	--------	7.7%	--------	7.6%	--------
Payments	6.1%	69.6%	6.8%	80.9%	6.4%	83.5%	6.5%	85.6%
Contests	2.7%	30.4%	1.6%	19.1%	1.3%	16.5%	1.1%	14.4%
Between Deadline 3 & Day 135	5.3%	--------	5.5%	--------	5.8%	--------	5.8%	--------
Payments	3.5%	65.6%	3.8%	69.2%	3.8%	64.7%	3.5%	60.8%
Contests	1.8%	34.4%	1.7%	30.8%	2.1%	35.3%	2.3%	39.2%

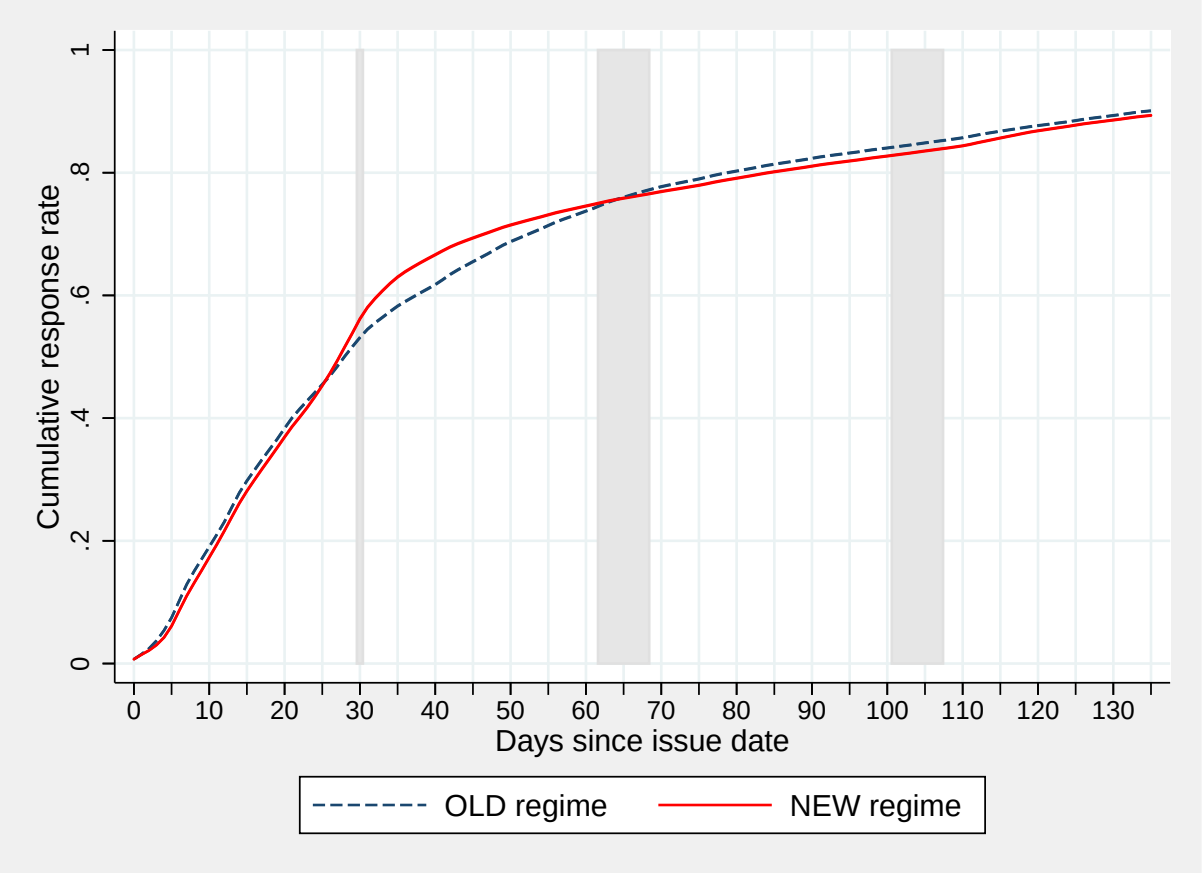
Note: In the bottom panel, "% of Total" is the percentage in reference to the number of tickets in the respective regime (column), and "% of Interval" is the percentage in reference to the number of first responses in the respective regime (column) and time interval (row).

4 Robustness Checks for OLD-NEW Comparisons

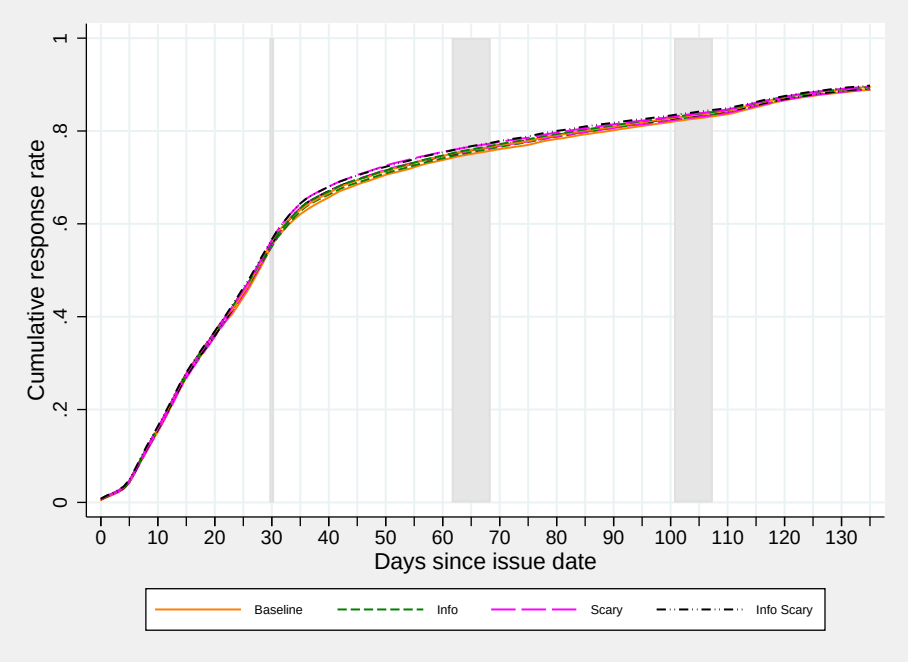
4.1 Main figures with confidence bands

For clarity, all figures in the main text do not contain confidence bands because those bands are so narrow. To illustrate, we present here some of the major figures with confidence bands. Because with the survival analysis confidence bands are easier to generate for cumulative response rates, we focus on those curves.

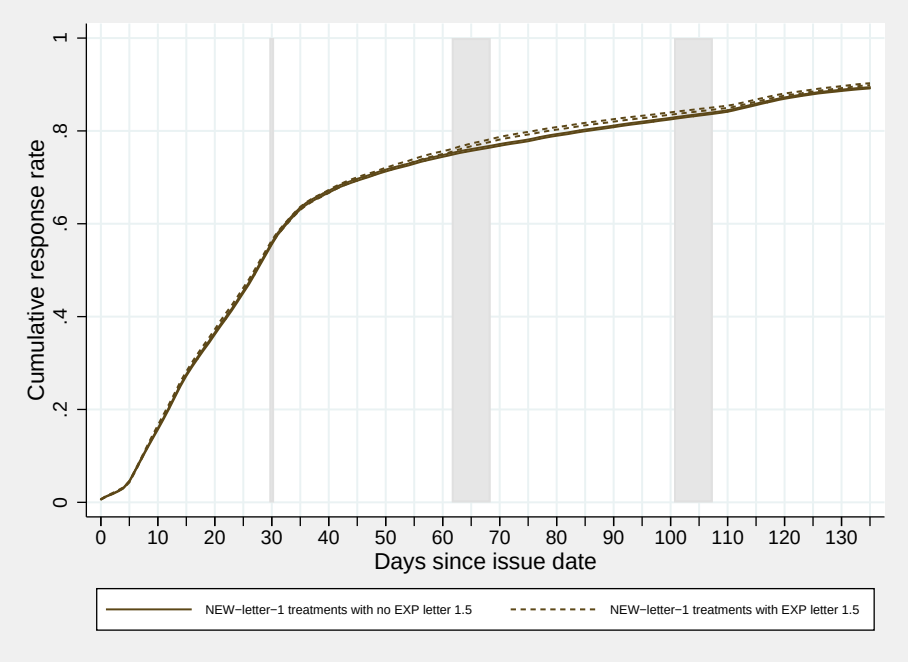
The figure below depicts, for the OLD and for the NEW regime, the upper and lower bounds of the 95-percent confidence interval for the cumulative response rates in Figure 1 (recall these are based on 3,355,094 (OLD) and 3,020,357 (NEW) observations). Note that, for each regime, the upper and lower bounds lie essentially on top of each other.



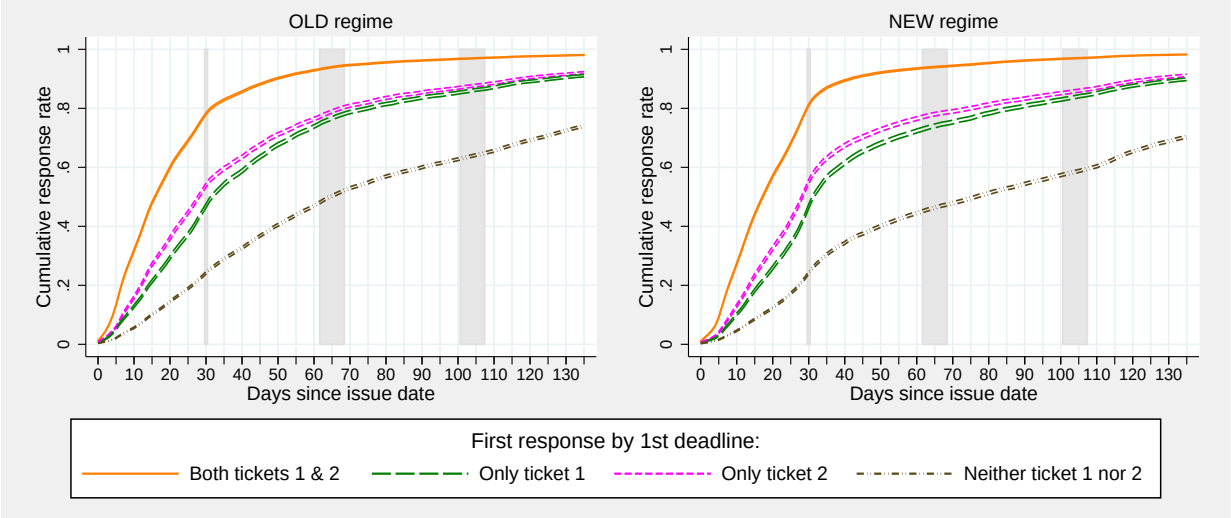
The figure below depicts, for the EXP regime, the upper and lower bounds of the 95-percent confidence interval for the cumulative response rates in Figure 4a (based on 38,009 (Baseline), 76,602 (Info), 38,199 (Scary), and 38,156 (Info Scary) observations). Here we see that the four letters have very similar effects even with tight confidence intervals.



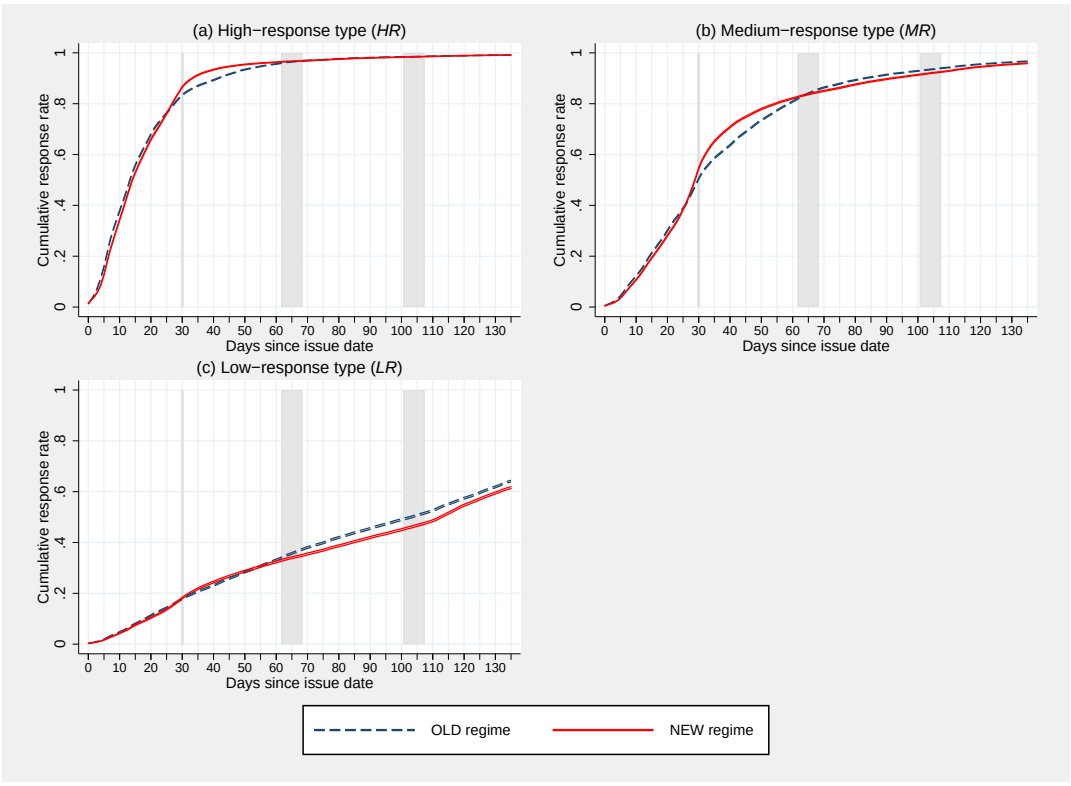
The figure below depicts the upper and lower bounds of the 95-percent confidence interval for the cumulative response rates in Figure 4b (based on 190,966 (without) and 80,123 (with) observations). The impact of the EXP Letter 1.5 is clearly statistically significant.



The figure below depicts, for the OLD and for the NEW regime, the upper and lower bounds of the 95-percent confidence interval for the cumulative response rates in Figure 5 (based on 56,035, 19,872, 20,429, and 41,559 observations in OLD, and on 55,783, 17,510, 17,166, and 35,111 observations in NEW).



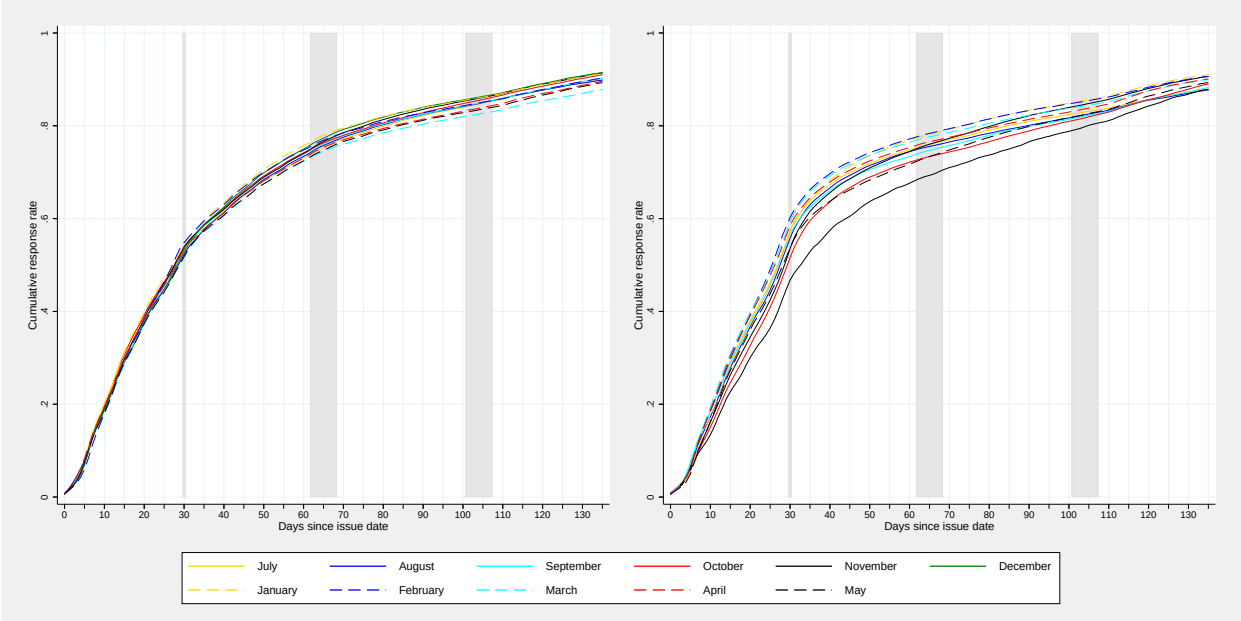
For each of the three predicted types, the figure below depicts, for the OLD and for the NEW regime, the upper and lower bounds of the 95-percent confidence interval for the cumulative response rates in Figure 6 (based on 582,065 observations in total).



4.2 OLD versus NEW in restricted samples

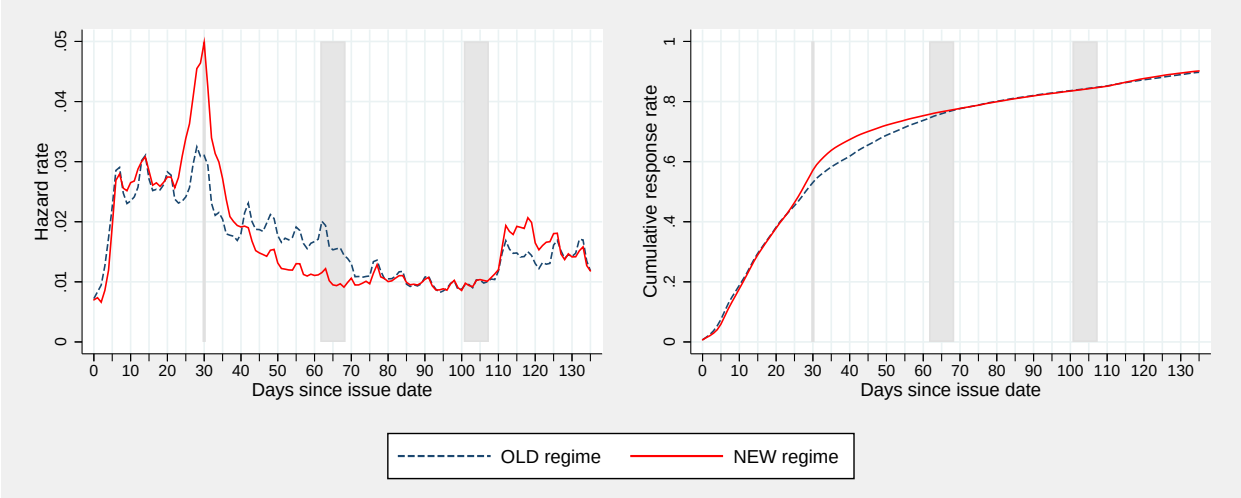
As discussed in Appendix 2, there are two idiosyncratic differences between the OLD and NEW regime: (i) the settlement program that existed in the OLD regime prior to February 1, 2012, and (ii) changes in ticketing and possibly also in enforcement during and in the weeks after Hurricane Sandy, which hit in late October of 2012. In this Appendix, we explore the robustness of our main results to these differences, as well as to other potential idiosyncratic differences about which we are unaware.

First, to get a sense of how much variation there is across months within a regime, we reestimate hazard rates by month under each regime. The left-hand panel below depicts CDFs by month in the OLD regime for tickets issued in the months of July 2011 through May 2012. The right-hand panel below depicts CDFs by month in the NEW regime for tickets issued in the months of July 2012 through May 2013. (We do not present June in these panels because June 2012 is split between the OLD and NEW regime.)



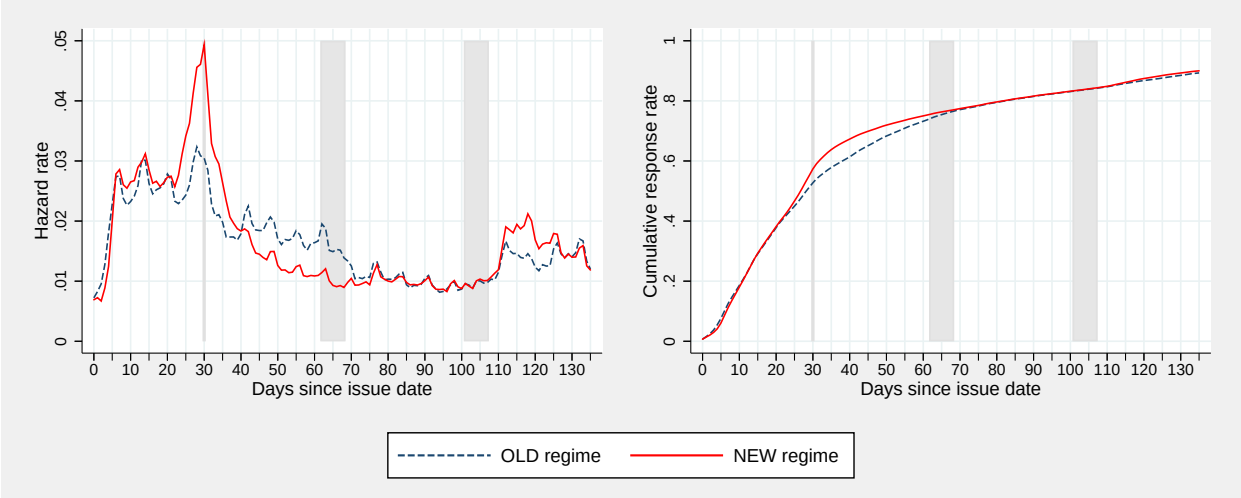
In the right-hand panel, we can clearly see the impact of Hurricane Sandy for tickets issued in October and November of 2012, and possibly also for tickets issued in September 2012 (the CDF flattens starting around days 30-40) and tickets issued in August 2012 (the CDF starts to flatten around days 60-70). There is nothing so evident in the OLD regime around the elimination of the settlement program (consistent with our discussion in Appendix 3). More generally, though, there is a fair amount of month-to-month variation under either regime, and thus we are wary of restricting the data too much.

To assess robustness of our main results to the impact of Hurricane Sandy, we restrict the sample to tickets issued between December 18, 2011 and June 17, 2012 in the OLD regime and issued between December 18, 2012 and June 17, 2013 in the NEW regime. In other words, for each regime we use the same time duration (6 months) and the same part of the calendar year. At the same time, for the NEW regime we start at a date such that tickets should no longer be influenced by Hurricane Sandy. The following figure replicates Figure 1 using this restricted sample. The figure is nearly identical to Figures 1, especially in terms of the impact of the timing of the first letter. Hence, we conclude that changes around Hurricane Sandy are not driving our main results.



There is one interesting difference between this figure and Figure 1: In this figure, the OLD regime corresponds more closely to the NEW regime in the days prior to NEW letter 1 (prior to day 20) and in the days after letter 2 (after days 70-76). Hence, it appears that those differences in Figure 1 may be an artifact of Hurricane Sandy.

Finally, as one last check of the impact of the settlement program, we reestimate hazard rates restricting the sample further, this time to summonses issued between February 1, 2012 and June 17, 2012 in the OLD regime and issued between February 1, 2013 and June 17, 2013 in the NEW regime. In other words, we are now only considering summonses under the OLD regime that had no access to the settlement program. The figure below looks much the same as the figure above, confirming that the elimination of the settlement program had little impact.

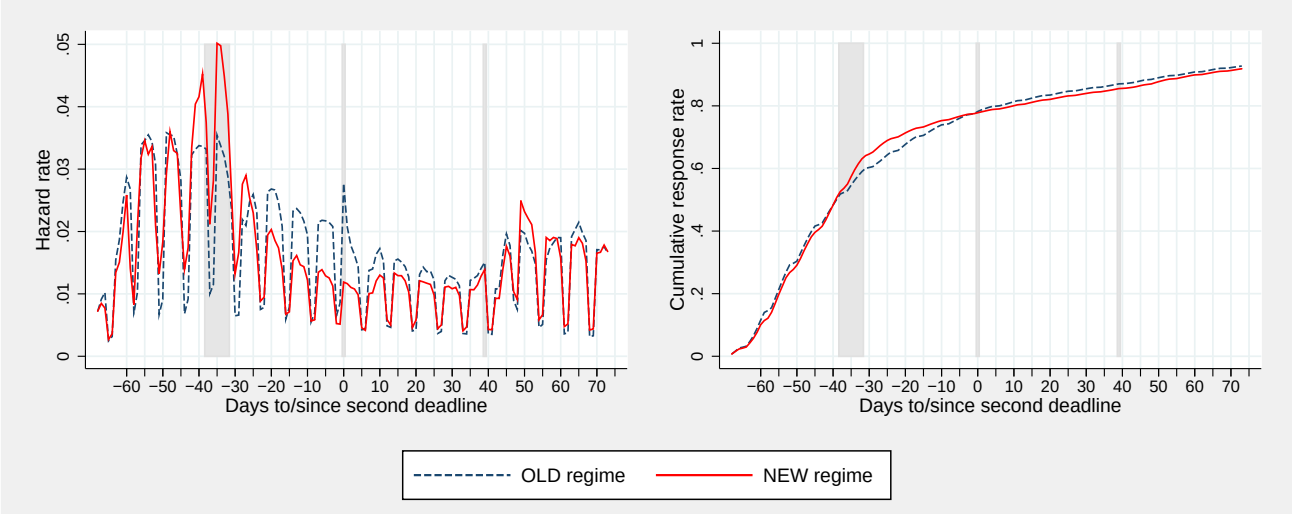


4.3 Controlling for ticket issue day of the week

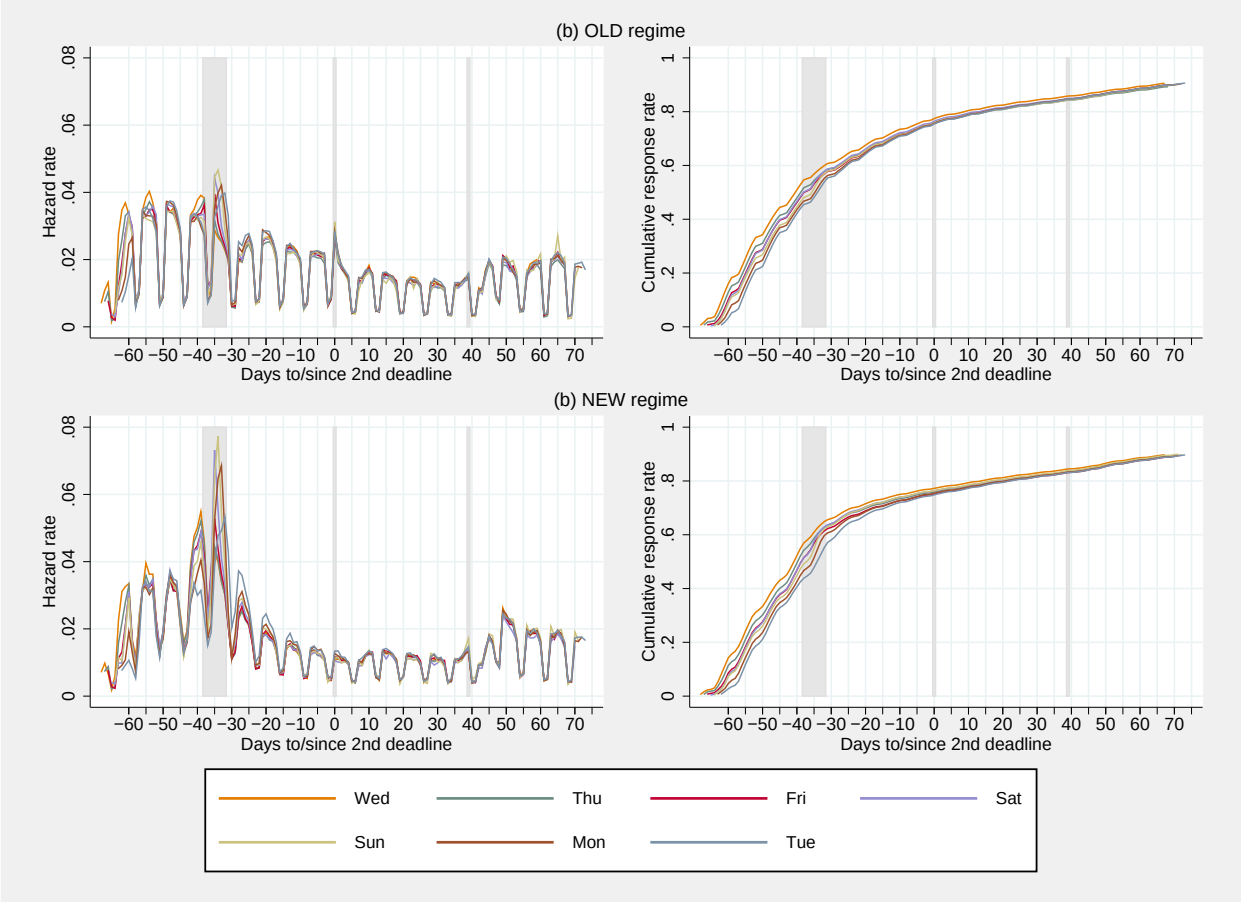
As discussed in Section 4.1, an issue with Figure 1 is that deadlines 2 and 3, as well as OLD Letter 1 and all subsequent letters, occur on different day numbers for different people depending on the day of the week on which a ticket is issued. One way to control for this issue is to look at responses by period as in Table 3. Here, we consider an alternative, graphical way to control for this issue.

Specifically, we redefine day 0 to be the date of deadline 2, which is a Monday for all tickets. Under this approach, OLD letter 1 is sent on day −27 for all tickets, deadline 2 is day 0 for all tickets, letter 2 is sent on day 8 for all tickets, deadline 3 is day 39 for all tickets, and letter 3 is sent on day 43 for all tickets. The figure below depicts hazard rates estimated with this alternative definition of days. We see the same general pattern as in Figure 1.

Beyond demonstrating the robustness of our main OLD-versus-NEW comparison, this figure also reveals some smaller effects that are not discernible in Figure 1. First, there is a noticeable spike at deadline 2 in the OLD regime (at day 0), and a small but noticeable spike at deadline 3 under both regimes (at day 39). Second, there is also a small but noticeable increase in hazard rates immediately after letter 2 is sent (on day 8) and immediately after letter 3 is sent (on day 43). Finally, there is a clear weekly cycle in hazard rates, with lower response rates on weekends.



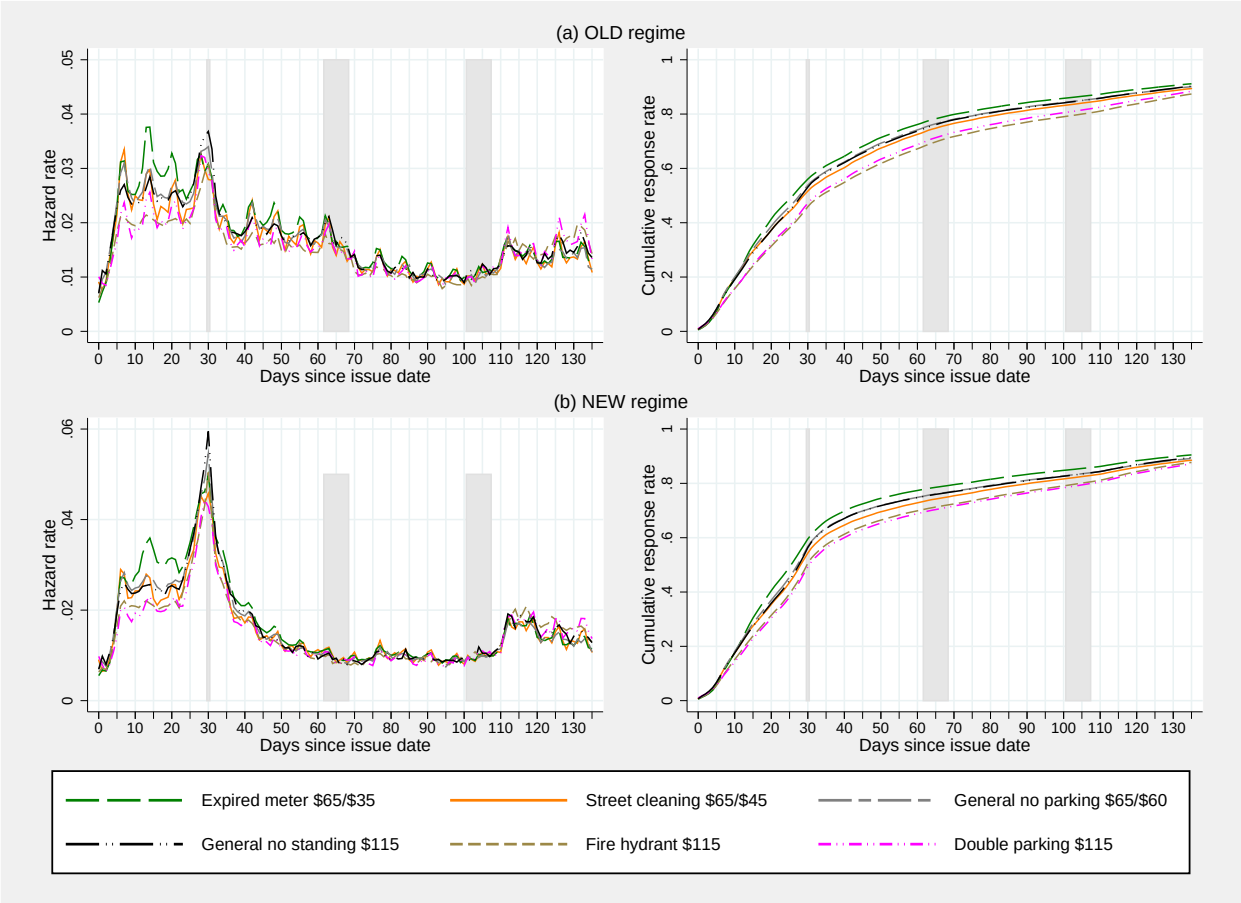
It is also instructive to produce the figure above separately for tickets issued on each day of the week. The figure below presents, for each regime, the seven sets of estimates as a function of days to/from deadline 2. In the OLD regime, from the day on which OLD letter 1 is sent (day −27), after which all future deadlines and letters are lined up on the same day of the week, the ticket-issue day of week is almost entirely irrelevant. Moreover, the same holds under the NEW regime, even though no letter is sent at that time. Hence, the day of the week on which a ticket is issued seems primarily to matter only for behavior prior to the date of OLD letter 1. Furthermore, most of the differences between tickets received on different days of the week seem to be due to different propensities to pay on different days of the week.



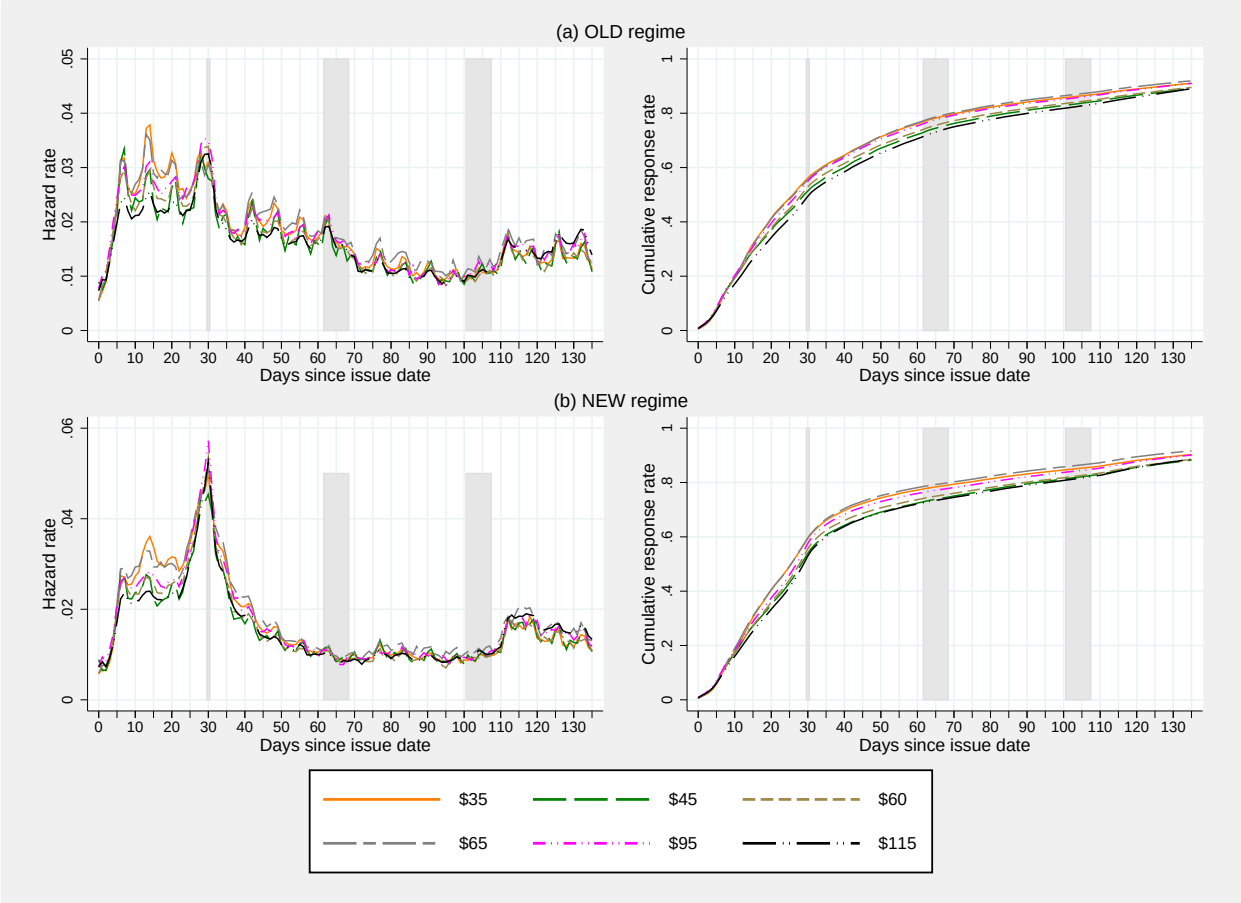
4.4 Impact of ticket characteristics

In this section, we investigate the impact of characteristics of the ticket (Section 5.4 in the main text investigates the impact of characteristics of the plate owner). Specifically, within each regime, we estimate daily hazard rates separately for different ticket types along three dimensions.

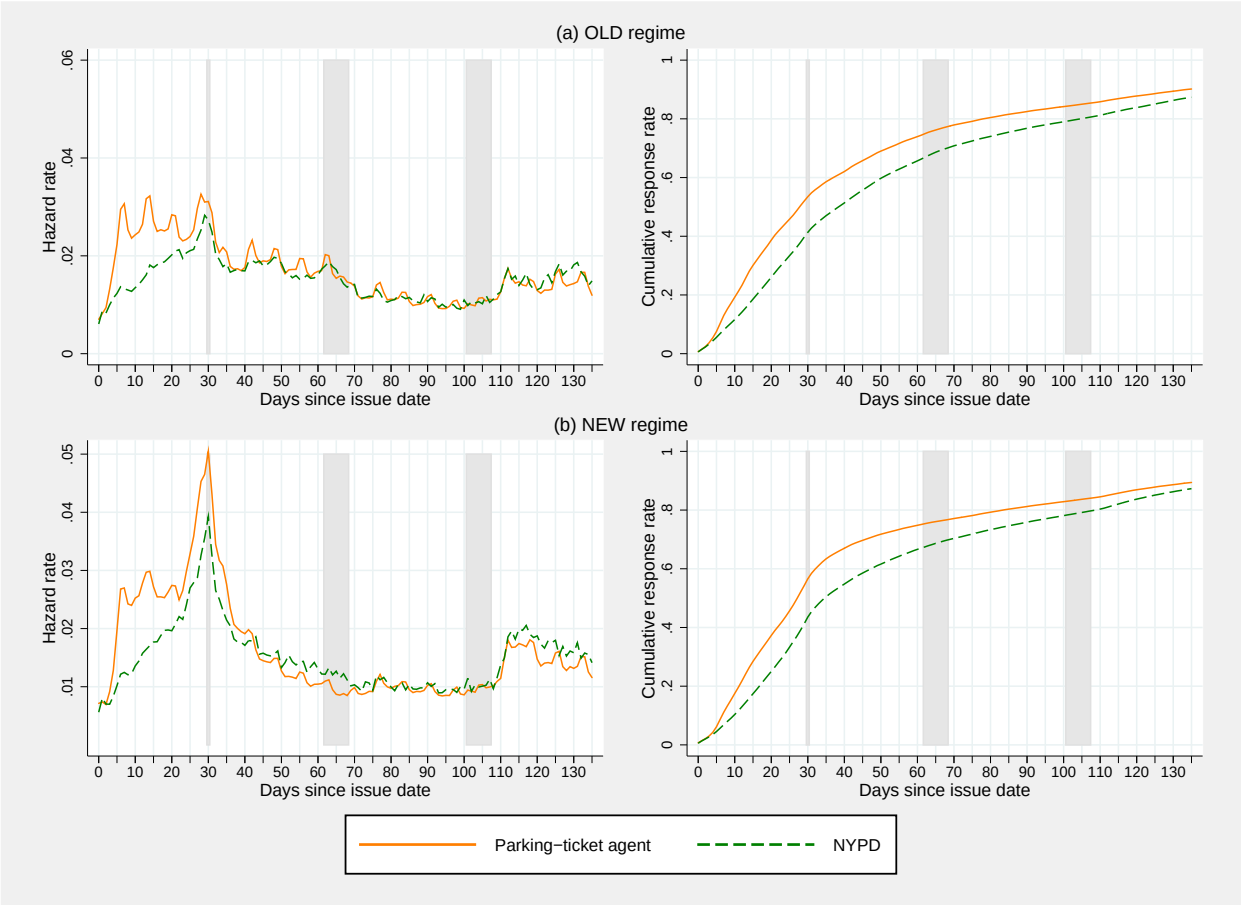
First, the figure below presents estimated hazard rates for each of the six most-common violation types. While there are clear differences across violation types, there does not seem to be anything systematic that relates naturally to some underlying mechanism. More importantly, for each violation type, the qualitative comparison between the OLD versus NEW regimes is essentially the same.



The figure below presents estimated hazard rates for each of the six most-common ticket amounts. Again, while there are clear differences across ticket amounts, there does not seem to be anything systematic that relates naturally to some underlying mechanism (e.g., higher fines are associated with neither higher nor lower hazard rates). More importantly, for each ticket amount, the qualitative comparison between the OLD versus NEW regimes is essentially the same.



The figure below presents estimated hazard rates for the two issuing agencies. Yet again, the qualitative comparison between the OLD versus NEW regimes is essentially the same for each sub-group. We further note that excluding tickets issued by the NYPD (2.8% of all tickets) does not affect our results.



5 Average Daily Hazard Rates (for Table 3)

In this section, we describe the details for how we create Table 3, and in particular how we calculate "average daily hazard rates." The key issue is that some of the period lengths differ for tickets issued on different days of the week, and thus we must break things down by issue day of week. We begin with some notation:

Define $dow \equiv$ issue day of week, with 0 = Sunday, 1 = Monday, ..., 6 = Saturday.

Define $N^{dow}(\gamma) \equiv$ number of tickets issued under regime γ on day of the week dow.

Define $N(\gamma) \equiv$ number of tickets issued under regime γ.

Define $F^{dow}(t, \gamma) \equiv$ cumulative response rate through day t under regime γ for tickets issued on day of the week dow.

The first step is to calculate $N^{dow}(\gamma)$ and $F^{dow}(t, \gamma)$ for all dow and γ, which will be inputs to the calculations below (and of course $N(\gamma) = \sum_{dow} N^{dow}(\gamma)$). We estimate $F^{dow}(t, \gamma)$ as described in the text, except that it is estimated separately for each issue dow. Next, we let t_1^{dow}, t_2^{dow}, t_3^{dow}, t_4^{dow}, and t_5^{dow} denote the end dates for each period for tickets issued on day of the week dow. Then:

	t_1^{dow}	t_2^{dow}	t_3^{dow}	t_4^{dow}	t_5^{dow}
$dow = 0$ (Sunday)	19	30	37	64	72
$dow = 1$ (Monday)	19	30	36	63	71
$dow = 2$ (Tuesday)	21	30	35	62	70
$dow = 3$ (Wednesday)	20	30	41	68	76
$dow = 4$ (Thursday)	19	30	40	67	75
$dow = 5$ (Friday)	19	30	39	66	74
$dow = 6$ (Saturday)	19	30	38	65	73

Define n_x^{dow} to be the number of days in period x for summonses issued on day of the week dow, and thus

$$n_x^{dow} = \begin{cases} t_1^{dow} + 1 & \text{if } x = 1 \\ t_x^{dow} - t_{x-1}^{dow} & \text{if } x \in \{2, 3, 4, 5\}. \end{cases}$$

Define $p_x^{dow}(\gamma) \equiv$ period-x hazard rate under regime γ for tickets issued on day of the week dow.

Define $r_x^{dow}(\gamma) \equiv$ period-x average daily hazard rate under regime γ for tickets issued on day of the week dow.

Note that if one has a constant daily hazard rate r in period x, and if the number of days

in period x is n, then the per-period hazard rate p would be[20]

$$p = 1 - (1 - r)^n.$$

Inverting this equation yields

$$r = 1 - (1 - p)^{1/n} \equiv g(p, n).$$

We can then use the estimated $F^{dow}(t, \gamma)$ and the function $g(p, n)$ to derive $p_x^{dow}(\gamma)$ and $r_x^{dow}(\gamma)$ as follows:

$$\begin{aligned} p_1^{dow}(\gamma) &= F^{dow}(t_1^{dow}, \gamma) \\ p_x^{dow}(\gamma) &= \frac{F^{dow}(t_x^{dow}, \gamma) - F^{dow}(t_{x-1}^{dow}, \gamma)}{1 - F^{dow}(t_{x-1}^{dow}, \gamma)} \quad \text{for } x \in \{2, 3, 4, 5\} \\ r_x^{dow}(\gamma) &= g\left(p_x^{dow}(\gamma), n_x^{dow}\right) \quad \text{for } x \in \{1, 2, 3, 4, 5\} \end{aligned}$$

Finally, we use the above to generate the output for Table 3:

(1) Overall average daily hazard rates in period x under regime γ:

$$r_x(\gamma) = \sum_{dow=0}^{6} \left(\frac{N^{dow}(\gamma)\left(1 - F^{dow}(t_{x-1}^{dow}, \gamma)\right)}{\sum_{dow'=0}^{6}\left(N^{dow'}(\gamma)\left(1 - F^{dow'}(t_{x-1}^{dow'}, \gamma)\right)\right)} \right) r_x^{dow}(\gamma)$$

Note: For each x and γ, $r_x(\gamma)$ is a weighted average of the seven $r_x^{dow}(\gamma)$'s, where the weights account for the changing proportion of outstanding tickets for each *dow* as we move through periods. The latter adjustment is not important, in the sense that the $r_x(\gamma)$'s would be little changed if the weights were replaced by $N^{dow}(\gamma)/N(\gamma)$.

(2) Overall cumulative response rates through period x under regime γ:

$$F_x(\gamma) = \sum_{dow=0}^{6} \left(\frac{N^{dow}(\gamma)}{N(\gamma)} \right) F^{dow}(t_x^{dow}, \gamma).$$

[20] Note that, in principle this equation is based on n being an integer, but the equation is well-defined and well-behaved even when n is not an integer.

6 Details for Analysis of EXP Regime

6.1 Ex post randomization into experimental cells

Because randomization in the field experiment occurred only when letters were generated, and not at the time tickets were issued, we create the eight experimental cells by performing an ex post random assignment for all tickets with a response prior to the generation of NEW letter 1 or EXP letter 1.5. Specifically, for each ticket with a response prior to day 18 (that did not receive any NEW letter 1) we ex post randomly assign it into one of the four NEW-letter-1 treatments, using the same probabilities as in Table 4. Similarly, for each ticket issued between July 22, 2013 through August 10, 2013 for which there is a response prior to day 46, we ex post randomly assign it into one of the two EXP-letter-1.5 treatments. Finally, we assign all tickets issued outside of July 22, 2013 through August 10, 2013 to the no-EXP-letter-1.5 treatment, since none of them could have received an EXP letter 1.5. After applying this ex post randomization, the number of observations in the four cells without EXP letter 1.5 are 38,009 (1), 76,602 ($1i$), 38,199 ($1s$), and 38,156 ($1is$), and the number of observations in the four cells with EXP letter 1.5 are 16,060 (1), 32,041 ($1i$), 15,976 ($1s$), and 16,046 ($1is$).

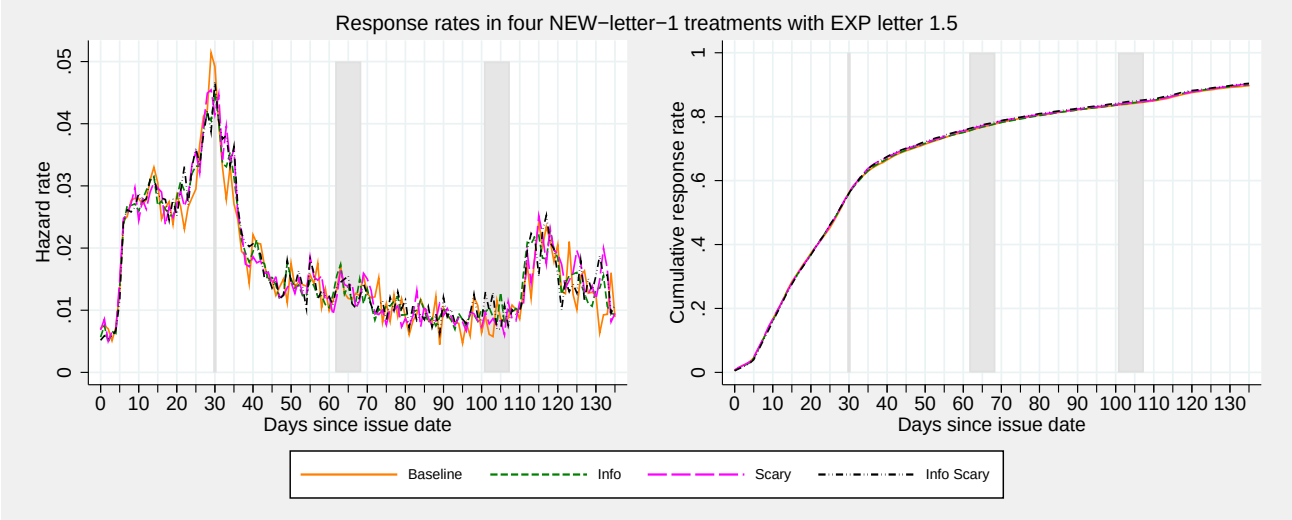
An alternative approach would be to conduct a single hazard-rate estimation prior to receipt of NEW letter 1, then four hazard-rate estimations between NEW letter 1 and EXP letter 1.5, and finally eight hazard-rate estimations after EXP letter 1.5. We chose not to pursue this approach because of difficulties associated with the split dates varying depending on the day of the week on which a ticket is issued.

6.2 Robustness checks for the EXP regime

Comparison of four experimental cells assigned to receive an EXP letter 1.5

Figure 4a in the main text depicts hazard rates for the four experimental cells assigned not to receive an EXP letter 1.5. It reveals that the four versions of NEW letter 1 lead to almost identical hazard rates, thus suggesting that the large differences in behavior between the OLD versus NEW regimes are not driven by differences in information or language.

Here, we confirm that this conclusion continues to hold when looking at the four experimental cells assigned to receive an EXP letter 1.5. The figure below is the analogue for Figure 4a for these four cells. We indeed see almost identical hazard rates across these four cells.



Impact of EXP letter 1.5 given info versus no-info NEW letter 1

For simplicity, in Figure 4b we study the impact of EXP letter 1.5 pooling together all four versions of NEW letter 1. However, one might wonder whether this hides a possible informational impact of EXP letter 1.5. Specifically, because EXP letter 1.5 contains the information box while NEW letters 1 and 1s do not, it potentially offers new information in those treatments. To test this possibility, the figure below pools treatments as follows:

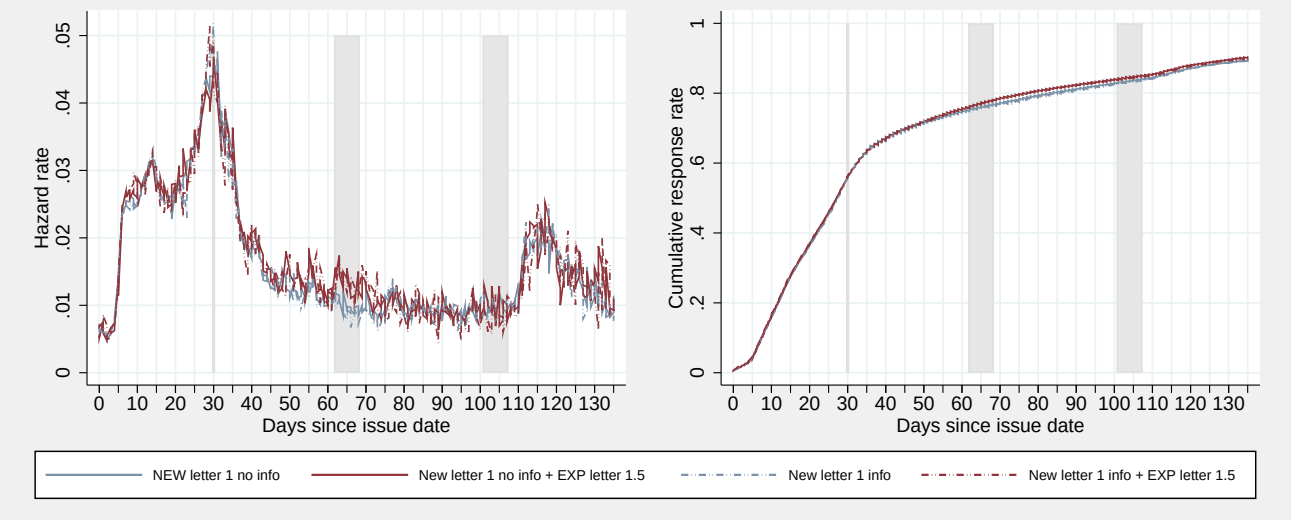
(i) NEW letter 1 no info: NEW letter 1 or 1s + no EXP letter 1.5

(ii) NEW letter 1 no info + EXP letter 1.5: NEW letter 1 or 1s + EXP letter 1.5

(iii) NEW letter 1 info: NEW letter 1i or 1is + no EXP letter 1.5

(iv) NEW letter 1 info + EXP letter 1.5: NEW letter 1i or 1is + EXP letter 1.5

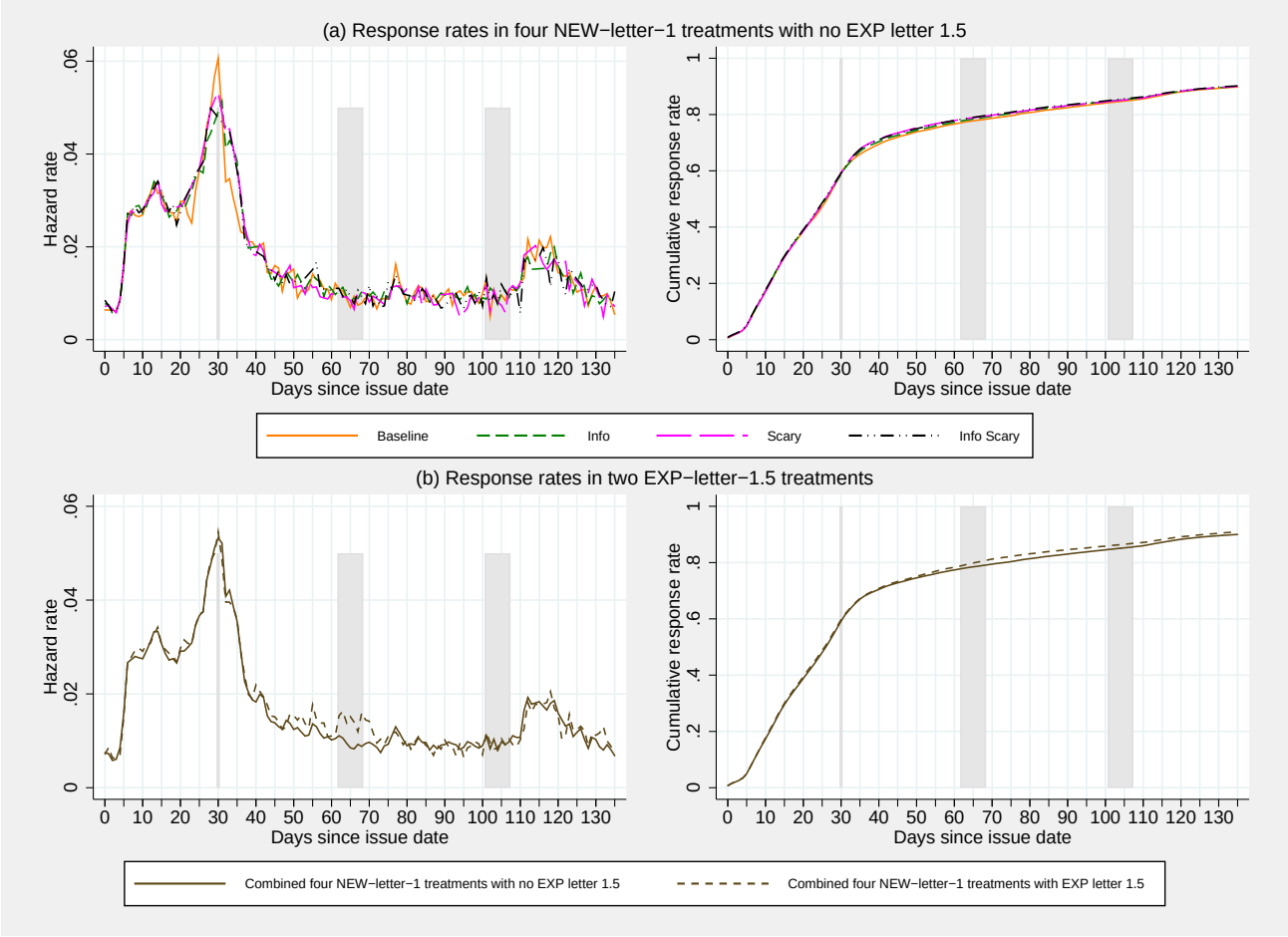
We see that (i) and (iii) look much the same, as do (ii) and (iv). Hence, it seems that there is no informational impact of EXP letter 1.5, and it serves merely as a reminder.



Dropping multiple-ticket plates

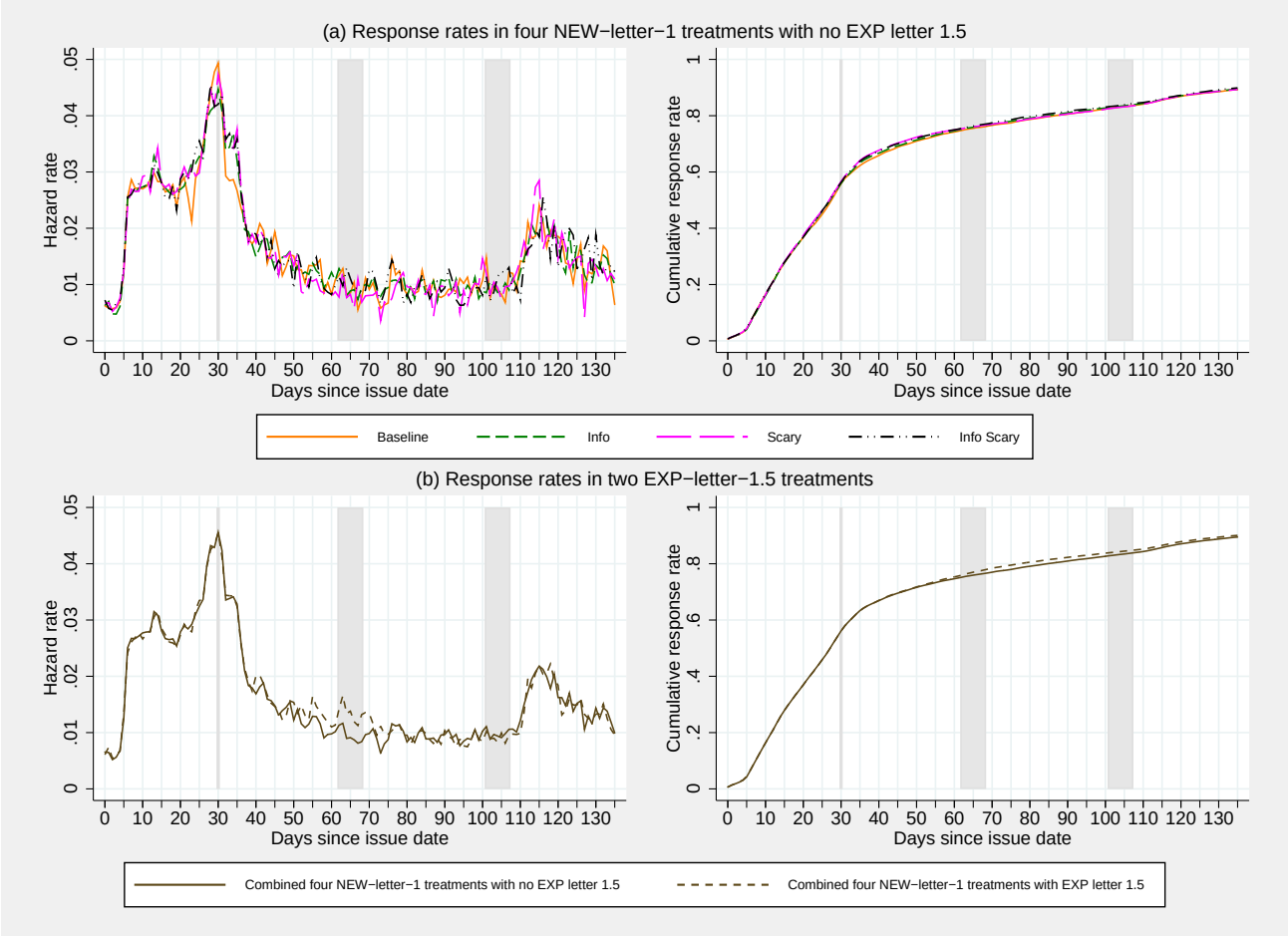
There is an issue for our analysis of the EXP regime: for the 37,534 plates that received multiple tickets during the EXP regime (out of the 216,371 plates that received at least one ticket during the EXP regime), it was possible for them to be assigned different treatments for different tickets. Specifically, because randomization was done at the level of a plate-date, all tickets received by a plate on a specific date would be assigned to the same treatment, while tickets received by a plate on different dates might receive different treatments. In practice, 16,822 plates ended up receiving letters from different treatments.

Because this issue would tend to attenuate any treatment effects, and because we are finding little or no treatment effects, it is important to assess the importance of this issue. To do so, we reproduce Figure 4 using only the 178,837 plates that received exactly one ticket during the EXP regime. The resulting figure, shown below, yields exactly the same conclusions as Figure 4 in the text.



Dropping summonses not eligible for EXP letter 1.5

As described in Appendix 6.1, in our main analysis we assign all tickets in the EXP regime issued outside of July 22, 2013 through August 10, 2013 to the no-EXP-letter-1.5 treatment, since none of them could have received an EXP letter 1.5. One might worry that there is something special about tickets issued outside of July 22, 2013 through August 10, 2013. Hence, the figure below reproduces Figure 4 limiting attention to the 159,754 summonses issued July 22, 2013 through August 10, 2013 (i.e., only for summonses eligible to receive EXP letter 1.5). For these summonses (and using the same ex post randomization as used in Appendix 6.1), the number of observations in the four cells without EXP letter 1.5 are 15,744 (1), 31,934 (1i), 16,047 (1s), and 15,906 (1is), and the number of observations in the four cells with EXP letter 1.5 are 16,060 (1), 32,041 (1i), 15,976 (1s), and 16,046 (1is). Again, the figure below yields exactly the same conclusions as Figure 4 in the text.



7 Details for Mixture-Model Analysis

In this appendix, we provide various details behind the mixture-model analysis in Sections 5.2 and 5.3.

7.1 Assessment of simplifying assumptions in mixture model

As discussed in Section 5.2, our mixture model makes three important simplifying assumptions:

> (1) It assumes that the population distribution of types π_k is the same for each regime γ.
>
> (2) It assumes the number of tickets received J_i is independent of one's type k.
>
> (3) It assumes that, within a type, the $p_t^k(\gamma)$'s are the same for all tickets received under regime γ.

We first assess (2) and (3). To do so, for each regime $\gamma \in \{\text{OLD, NEW}\}$ and for each number of total tickets within that regime $J \in \{1, ..., 7\}$, we derive the empirical distribution of first responses across the six periods for the first ticket, the second ticket, and so forth. Tables A5 and A6 present the results. In Table A5, J is the total number of tickets received by a plate under the OLD regime, and j is the ordered ticket number (e.g., the $J = 4$, $j = 2$ row reflects the distribution of responses for the second ticket received for each of the 79,363 plates that received exactly four tickets under the OLD regime). Table A6 presents the same information for the NEW regime.

In Tables A5 and A6, within each J and γ, there seems to be somewhat systematic but very slow change in the response patterns across the j's. In other words, assumption (3) seems reasonable. On the other hand, we see that the response distribution does vary with J, and in particular the plates that receive more tickets have later responses. Combined with the relatively stable response patterns within each J and γ, this result suggests that (2) does not hold very well. But it holds well enough for us to view it as a reasonable simplification.

We next assess (1). To do so, we estimate the mixture model from Section 5.2 separately for various (J, γ, K) combinations—i.e., $(J = 5, \gamma = \text{OLD}, K = 3)$ would mean that we use data on all plates that received exactly 5 tickets under the OLD regime, and estimate the mixture model assuming 3 types (this of course yields hazard rates only for the OLD regime). We did this for each combination of $J \in \{4, 5, 6, 7\}$, $\gamma \in \{\text{OLD, NEW}\}$, and $K \in \{3, 4\}$, although the $(J = 5, \gamma = \text{NEW}, K = 3)$ estimation did not converge.

Table A7 presents the estimated π_k's for each combination. For each K and J, there is remarkable consistency in the π_k's across the two regimes. In other words, (1) seems quite reasonable. Moreover, when comparing different J's, the π_k's vary some—consistent with above, the distribution of types seems to worsen for larger J. But these changes are remarkably small and not always monotonic. Hence, Table A7 further supports our conclusion that (2) is a reasonable approximation.

Table A5: Response Patterns for Multiple-Ticket Plates in OLD Regime

		Period of First Response						
		1	2	3	4	5	6	Total
J=1	j=1	47.94%	16.50%	6.16%	12.81%	1.66%	14.94%	662,206
J=2	j=1	42.65%	16.72%	6.75%	14.39%	2.00%	17.49%	269,304
	j=2	42.09%	16.63%	6.92%	14.02%	1.94%	18.39%	
J=3	j=1	38.68%	16.36%	7.15%	15.84%	2.34%	19.62%	137,895
	j=2	38.99%	16.46%	7.17%	15.33%	2.28%	19.77%	
	j=3	37.59%	16.25%	7.10%	15.24%	2.22%	21.60%	
J=4	j=1	36.34%	15.90%	7.38%	16.40%	2.57%	21.42%	79,363
	j=2	36.73%	16.10%	7.49%	16.26%	2.35%	21.08%	
	j=3	36.14%	15.89%	7.39%	16.09%	2.45%	22.05%	
	j=4	34.54%	15.64%	7.31%	16.12%	2.26%	24.13%	
J=5	j=1	34.69%	15.48%	7.23%	17.45%	2.63%	22.53%	49,129
	j=2	35.16%	15.76%	7.64%	17.02%	2.60%	21.83%	
	j=3	34.51%	16.13%	7.31%	17.27%	2.63%	22.16%	
	j=4	33.80%	15.63%	7.55%	16.49%	2.51%	24.02%	
	j=5	32.33%	14.97%	7.29%	16.70%	2.56%	26.15%	
J=6	j=1	33.28%	15.24%	7.19%	18.06%	2.95%	23.29%	31,728
	j=2	34.49%	15.43%	7.58%	17.13%	2.75%	22.61%	
	j=3	33.81%	15.59%	7.46%	17.19%	2.86%	23.08%	
	j=4	33.46%	15.19%	7.44%	16.99%	2.66%	24.25%	
	j=5	32.53%	14.90%	7.44%	16.61%	2.71%	25.81%	
	j=6	30.76%	14.43%	7.27%	16.98%	2.47%	28.09%	
J=7	j=1	32.42%	15.39%	7.17%	18.03%	3.00%	23.99%	21,531
	j=2	33.28%	14.91%	7.81%	17.63%	2.97%	23.40%	
	j=3	33.07%	15.09%	7.47%	17.60%	2.85%	23.91%	
	j=4	32.53%	14.78%	7.41%	17.57%	3.00%	24.70%	
	j=5	31.57%	14.50%	7.45%	17.74%	2.73%	26.00%	
	j=6	31.03%	14.21%	7.32%	17.10%	2.54%	27.80%	
	j=7	30.07%	13.65%	6.91%	17.07%	2.81%	29.48%	

Table A6: Response Patterns for Multiple-Ticket Plates in NEW Regime

		Period of First Response						
		1	2	3	4	5	6	Total
J=1	j=1	46.10%	22.43%	8.53%	7.07%	0.90%	14.97%	644,122
J=2	j=1	40.64%	22.34%	9.23%	8.86%	1.22%	17.72%	252,659
	j=2	40.48%	21.77%	8.85%	8.53%	1.24%	19.12%	
J=3	j=1	36.56%	21.81%	9.86%	10.03%	1.42%	20.33%	125,570
	j=2	36.95%	21.14%	9.42%	10.05%	1.52%	20.92%	
	j=3	36.10%	20.84%	8.90%	9.81%	1.49%	22.86%	
J=4	j=1	33.70%	21.24%	9.99%	11.18%	1.62%	22.26%	70,726
	j=2	34.65%	20.29%	9.53%	11.09%	1.70%	22.74%	
	j=3	34.43%	20.08%	9.32%	10.83%	1.74%	23.60%	
	j=4	33.33%	19.69%	9.00%	10.49%	1.76%	25.73%	
J=5	j=1	31.95%	20.55%	10.26%	11.66%	1.82%	23.76%	42,944
	j=2	32.94%	19.63%	9.78%	11.71%	1.93%	24.00%	
	j=3	33.11%	19.25%	9.45%	11.48%	1.88%	24.84%	
	j=4	32.40%	18.93%	9.08%	11.57%	2.02%	26.00%	
	j=5	31.01%	18.90%	8.84%	11.32%	1.94%	28.00%	
J=6	j=1	30.30%	20.29%	10.30%	12.61%	1.84%	24.66%	27,550
	j=2	31.86%	19.41%	9.70%	12.26%	2.00%	24.78%	
	j=3	31.62%	18.71%	9.89%	12.24%	2.07%	25.46%	
	j=4	31.36%	18.62%	9.55%	11.85%	2.15%	26.46%	
	j=5	30.86%	18.70%	9.16%	11.74%	1.92%	27.63%	
	j=6	29.63%	18.12%	9.13%	11.70%	2.04%	29.39%	
J=7	j=1	29.98%	19.53%	9.99%	13.18%	2.18%	25.14%	18,554
	j=2	30.55%	18.63%	10.31%	12.36%	2.11%	26.03%	
	j=3	30.31%	18.28%	9.67%	12.76%	2.19%	26.80%	
	j=4	30.75%	17.97%	9.19%	13.00%	2.29%	26.79%	
	j=5	30.31%	17.27%	9.32%	13.18%	2.10%	27.82%	
	j=6	29.47%	17.41%	8.74%	12.00%	2.24%	30.14%	
	j=7	28.25%	17.03%	8.65%	12.12%	2.20%	31.75%	

Table A7: Estimated Population Distributions for Mixture Model

		K=3			K=4			
		π_{HR}	π_{MR}	π_{LR}	π_{HR}	π_{MHR}	π_{MLR}	π_{LR}
J=4	OLD	31.95%	42.67%	25.38%	26.54%	23.86%	29.34%	20.26%
	NEW	31.37%	40.86%	27.77%	26.15%	24.92%	28.77%	20.16%
J=5	OLD	30.03%	43.68%	26.29%	23.29%	23.00%	33.92%	19.79%
	NEW				23.09%	25.36%	31.87%	19.68%
J=6	OLD	28.94%	44.21%	26.85%	20.93%	24.36%	35.94%	18.77%
	NEW	28.26%	42.95%	28.79%	19.28%	28.19%	33.41%	19.12%
J=7	OLD	29.18%	43.84%	26.98%	19.92%	28.81%	34.66%	16.61%
	NEW	29.30%	41.94%	28.76%	17.58%	28.00%	34.57%	19.85%

Note: For *(J=5, γ=NEW, K=3),* estimation did not converge.

7.2 Details of estimated mixture model (Table 5)

As described in Section 5.2, the estimation routine estimates hazard rates at the per-period level—that is, the output includes estimated parameter values and standard errors for $(p_1^k(\gamma), p_2^k(\gamma), p_3^k(\gamma), p_4^k(\gamma), p_5^k(\gamma), \pi_k)$ for each regime $\gamma \in \{\text{OLD, NEW}\}$ and for each type $k \in \{1, ..., K\}$. Table A8 below presents the estimates.

For ease of interpretation, however, for Table 5 in the text we convert each per-period hazard rate $p_x^k(\gamma)$ into an equivalent *average daily hazard rate*, which we denote by $r_x^k(\gamma)$. To do so, much as in Appendix 5, we use the fact that if one had a constant daily hazard rate r in period x, and if the number of days in period x is n, then the per-period hazard rate p would be $p = 1 - (1 - r)^n$.

There is an issue here, however, in what to use for n, because different people have a different number of days within a period depending on the day of the week on which they received a ticket (as discussed in Appendix 5). One possible approach would be to assume that, within each regime-period, everyone has the same constant daily hazard rate regardless of the length of the period (in which case people with a longer period length would have a larger period hazard rate). We then could have estimated those constant daily hazard rates. To reduce the computational burden, we chose not to pursue this approach.

Instead, when converting the estimated per-period hazard rates into average daily hazard rates, we use the average number of days in a period among those in the sample of 2,708,255 summonses used in the estimation. Specifically, we define $q^{dow}(\gamma)$ to be the proportion of summonses issued in regime γ that were issued on day of the week dow. For instance, recalling that $dow = 0$ is Sunday, and using $N^{dow}(\gamma)$ and $N(\gamma)$ as defined in Appendix 5,

$$q^0(\text{OLD}) \equiv \frac{\text{number of summonses issued on Sunday in OLD regime}}{\text{number of summonses issued in OLD regime}} = \frac{N^0(\text{OLD})}{N(\text{OLD})}.$$

Using n_x^{dow} from Appendix 5, the average number of days in period x for summonses issued under regime γ is

$$\bar{n}_x(\gamma) = \sum_{dow=0}^{6} q^{dow}(\gamma) n_x^{dow}.$$

Table A9 presents the calculations for the $\bar{n}_x(\gamma)$'s. Note that, because the $q^{dow}(\text{OLD})$'s are a little different from the $q^{dow}(\text{NEW})$'s, the $\bar{n}_x(\text{OLD})$'s are slightly different from the $\bar{n}_x(\text{NEW})$'s. The differences are small, however, and Table 5 would look much the same if we used the average number of days in period x across both regimes (i.e., if we used the TOTAL column in Table A9).

With the $\bar{n}_x(\gamma)$'s in hand, one can easily convert the estimated per-period hazard rates

$p_x^k(\gamma)$ into equivalent daily hazard rates $r_x^k(\gamma)$. In particular, using the function $g(p,n)$ from Appendix 5, the estimated daily hazard rates can be derived from

$$r_x^k(\gamma) = g(p_x^k(\gamma), \bar{n}_x(\gamma)).$$

Then, using the delta method, the standard error for $r_x^k(\gamma)$ is derived from

$$\begin{aligned} \sigma_r &= \frac{\partial g(p_x^k(\gamma), \bar{n}_x(\gamma))}{\partial p}\sigma_p \\ &= \frac{1}{\bar{n}_x(\gamma)}(1 - p_x^k(\gamma))^{1/\bar{n}_x(\gamma)-1}\sigma_p \end{aligned}$$

where σ_p is the estimated standard error for $p_x^k(\gamma)$.

Finally, Section 5.3 in the text describes some of the selection patterns implied by the estimated model. Table A10 below presents the details of selection for the estimated three-type model.

Table A8: Estimated Mixture Model with Per-Period Hazard Rates

	Type	π_k	Regime	p_1	p_2	p_3	p_4	p_5
K=1		1.000	OLD	36.01%	24.61%	15.04%	39.46%	9.94%
				(0.04%)	(0.05%)	(0.04%)	(0.06%)	(0.05%)
		----	NEW	34.54%	31.08%	20.84%	30.00%	6.74%
				(0.04%)	(0.05%)	(0.05%)	(0.07%)	(0.04%)
K=2	HR	0.640	OLD	52.07%	43.19%	30.67%	76.71%	29.76%
				(0.07%)	(0.09%)	(0.11%)	(0.14%)	(0.29%)
		(0.001)	NEW	49.61%	53.64%	45.90%	65.37%	19.02%
				(0.07%)	(0.10%)	(0.14%)	(0.19%)	(0.26%)
	LR	0.360	OLD	11.15%	9.09%	6.88%	24.98%	7.55%
				(0.05%)	(0.05%)	(0.05%)	(0.09%)	(0.05%)
		(0.001)	NEW	9.98%	10.49%	9.00%	20.07%	5.24%
				(0.05%)	(0.06%)	(0.06%)	(0.08%)	(0.05%)
K=3	HR	0.338	OLD	73.51%	59.01%	34.05%	79.46%	17.97%
				(0.13%)	(0.22%)	(0.32%)	(0.37%)	(0.76%)
		(0.001)	NEW	70.62%	71.85%	56.83%	61.98%	12.44%
				(0.13%)	(0.20%)	(0.41%)	(0.63%)	(0.68%)
	MR	0.413	OLD	25.53%	30.36%	23.74%	65.83%	25.26%
				(0.10%)	(0.11%)	(0.10%)	(0.15%)	(0.19%)
		(0.001)	NEW	23.33%	37.56%	33.90%	55.21%	16.15%
				(0.10%)	(0.12%)	(0.13%)	(0.17%)	(0.16%)
	LR	0.249	OLD	9.82%	5.85%	4.08%	15.71%	5.09%
				(0.06%)	(0.05%)	(0.04%)	(0.09%)	(0.05%)
		(0.001)	NEW	8.78%	6.24%	4.74%	12.41%	3.57%
				(0.07%)	(0.06%)	(0.05%)	(0.09%)	(0.05%)
K=4	HR	0.261	OLD	80.33%	53.54%	23.99%	74.89%	17.65%
				(0.15%)	(0.32%)	(0.41%)	(0.47%)	(0.81%)
		(0.001)	NEW	77.95%	69.26%	47.67%	55.87%	12.42%
				(0.15%)	(0.29%)	(0.56%)	(0.77%)	(0.74%)
	MHR	0.275	OLD	35.11%	49.21%	40.52%	83.08%	31.48%
				(0.17%)	(0.20%)	(0.25%)	(0.29%)	(0.78%)
		(0.002)	NEW	31.51%	58.51%	56.34%	72.78%	19.15%
				(0.17%)	(0.21%)	(0.30%)	(0.42%)	(0.64%)
	MLR	0.296	OLD	20.59%	16.00%	12.98%	50.12%	18.42%
				(0.11%)	(0.11%)	(0.10%)	(0.22%)	(0.16%)
		(0.001)	NEW	19.11%	19.90%	18.90%	41.00%	12.02%
				(0.11%)	(0.14%)	(0.15%)	(0.21%)	(0.12%)
	LR	0.169	OLD	7.19%	4.55%	2.82%	9.19%	3.04%
				(0.08%)	(0.06%)	(0.05%)	(0.11%)	(0.05%)
		(0.001)	NEW	6.25%	4.56%	2.89%	7.00%	2.12%
				(0.08%)	(0.07%)	(0.06%)	(0.09%)	(0.05%)

Note: Estimated per-period hazard rates by period (p_t's) for each type, as well as estimated proportions of each type (π_k's). Standard errors in parenthesis.

Table A9: Calculating the Average Number of Days Per Period (used to create Table 5)

Proportion of Summons Issued by Day of Week on which Ticket is Issued

Regime	Sun	Mon	Tue	Wed	Thu	Fri	Sat
OLD	0.029	0.150	0.183	0.148	0.179	0.185	0.125
NEW	0.029	0.160	0.176	0.144	0.185	0.179	0.127
TOTAL	0.029	0.155	0.180	0.146	0.182	0.183	0.126

Number of Days Per Period by Day of Week on which Ticket is Issued

Period	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	20	20	22	21	20	20	20
2	11	11	9	10	11	11	11
3	7	6	5	11	10	9	8
4	27	27	27	27	27	27	27
5	8	8	8	8	8	8	8

Average Days Per Period By Regime

Period	OLD	NEW	TOTAL
1	20.51	20.50	20.51
2	10.49	10.50	10.49
3	8.11	8.10	8.11
4	27	27	27
5	8	8	8

Note: Based on the 2,708,255 summonses used to estimate the mixture model.

Table A10: Cumulative Responses and Selection Implied by Estimated 3-Type Mixture Model

Cumulative Responses and Selection in the OLD Regime

	% of Type Responded			Type's Proportion of Remaining Population		
After	HRs	MRs	LRs	HRs	MRs	LRs
Period 1	73.51%	25.53%	9.82%	14.20%	49.74%	36.06%
Period 2	89.14%	48.13%	15.09%	7.82%	46.55%	45.63%
Period 3	92.84%	60.45%	18.55%	6.11%	42.05%	51.84%
Period 4	98.53%	86.48%	31.35%	2.12%	24.22%	73.66%
Period 5	98.79%	89.90%	34.85%	1.93%	20.17%	77.90%

Cumulative Responses and Selection in the NEW Regime

	% of Type Responded			Type's Proportion of Remaining Population		
After	HRs	MRs	LRs	HRs	MRs	LRs
Period 1	70.62%	23.33%	8.78%	15.23%	49.51%	35.27%
Period 2	91.73%	52.13%	14.48%	6.28%	45.28%	48.44%
Period 3	96.43%	68.36%	18.53%	3.44%	37.99%	58.57%
Period 4	98.64%	85.83%	28.64%	1.88%	24.44%	73.68%
Period 5	98.81%	88.12%	31.19%	1.77%	21.99%	76.25%

7.3 Typing of plates

As described in the text, for each of the 657,890 plates used in the estimation sample, we derive the predicted probability that plate i with observed behavior $\boldsymbol{\theta}^i$ is type k by plugging the estimated parameters for the π_k's and the $p_t^k(\gamma)$'s into

$$\hat{\pi}(k|\boldsymbol{\theta}^i) = \frac{\pi_k \ell_k(\boldsymbol{\theta}^i)}{\sum_{k'} \pi_{k'} \ell_{k'}(\boldsymbol{\theta}^i)}.$$

We then assign plate i to be type k as long as $k = \arg\max_{k'} \hat{\pi}(k'|\boldsymbol{\theta}^i)$ and $\hat{\pi}(k|\boldsymbol{\theta}^i) > Z$ for some exogenously chosen Z. For $Z = \frac{1}{3}$, we type all plates to be their most likely type. For $Z > \frac{1}{3}$, we might not type some plates. The following table reports how the typing depends on Z:

	$Z = \frac{1}{3}$	$Z = 0.50$	$Z = 0.60$	$Z = 0.75$	$Z = 0.90$
type h	34.6%	34.6%	32.0%	25.0%	12.1%
type m	41.2%	40.5%	34.9%	25.1%	12.8%
type l	24.2%	24.1%	21.6%	18.8%	15.9%
untyped	—	0.7%	11.5%	31.0%	59.2%

For the main text, we chose $Z = 0.60$ to balance sufficient confidence in the typing against typing sufficiently many plates. However, Figures 6, 7, and 8 would look much the same for other values of Z. To illustrate, using the holdout sample, Figure A5 below depicts the type-specific daily hazard rates in the OLD versus NEW regimes for Z equal to $\frac{1}{3}$, 0.60, 0.75, and 0.90, where panel (b) is equivalent to Figure 6 in the main text. All four panels yield the same message.

Because it is difficult to see the details for the *LR*s in Figure 6, Figure A6 below reproduces Figure 6 in panel (a), while panels (b), (c), and (d) each focus on one type with the hazard-rate axis appropriately re-scaled.

Figure A6d seems to suggest that the shift from the OLD to the NEW regime leads to worse cumulative outcomes for the *LR*s—in that their cumulative response rates are noticeably larger in the OLD regime from deadline 2 onward. Recall from Appendix 4.2, however, that there is a similar pattern in aggregate responses in Figure 1 that seems to be an artifact of Hurricane Sandy. Using an analogous approach, Figure A7 reproduces Figure A6 restricting the sample to summonses issued between December 18 and June 17 of each year. In Figure A7, there is little long-run difference between the OLD and NEW regimes for the *LR*s, suggesting that the difference in Figure A6 is an artifact of Hurricane Sandy.

Figure A5: Hazard Rates and Cumulative Response Rates by Predicted Type for Various Z

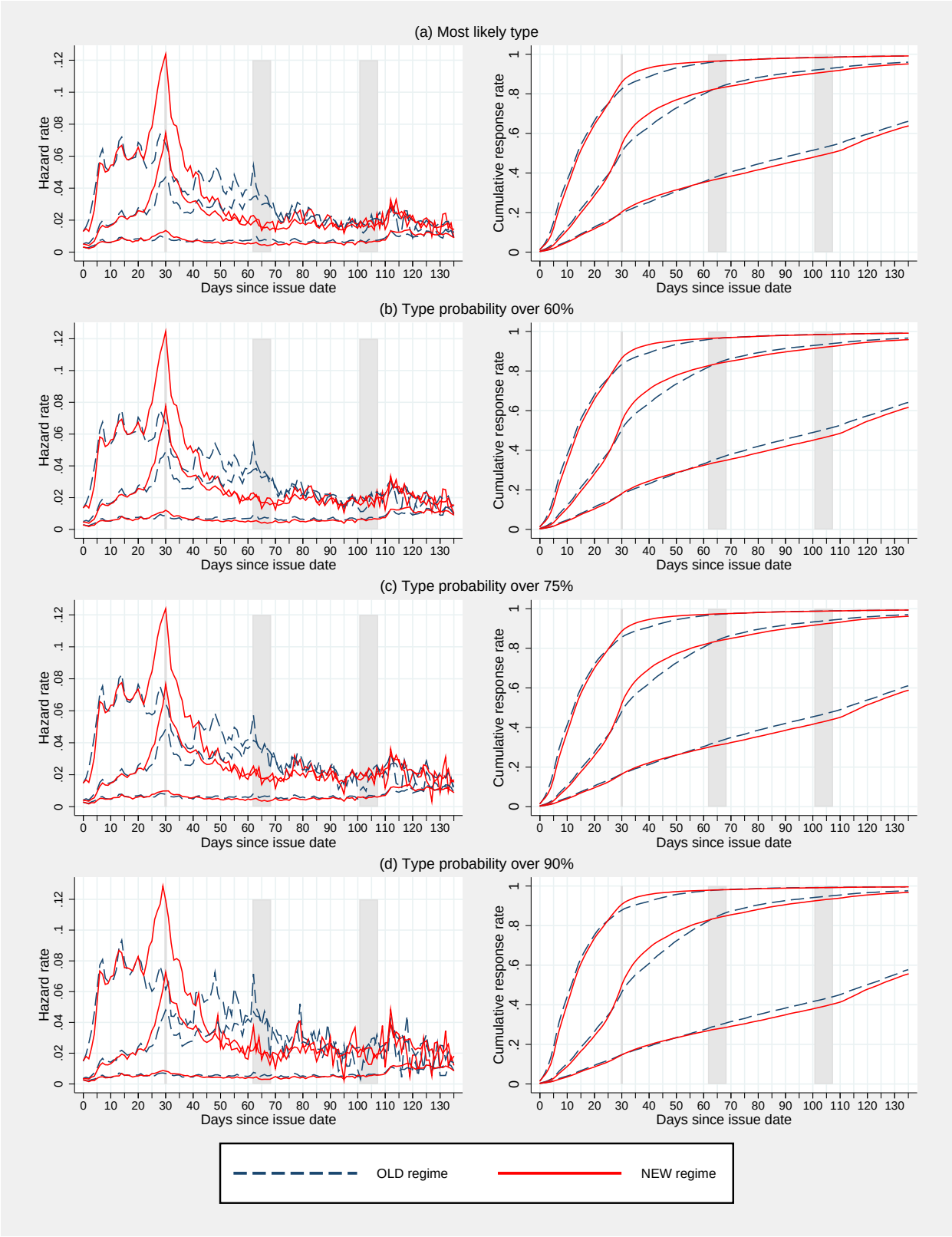


Figure A6: Hazard Rates and Cumulative Response Rates by Predicted Type for $Z = 0.6$

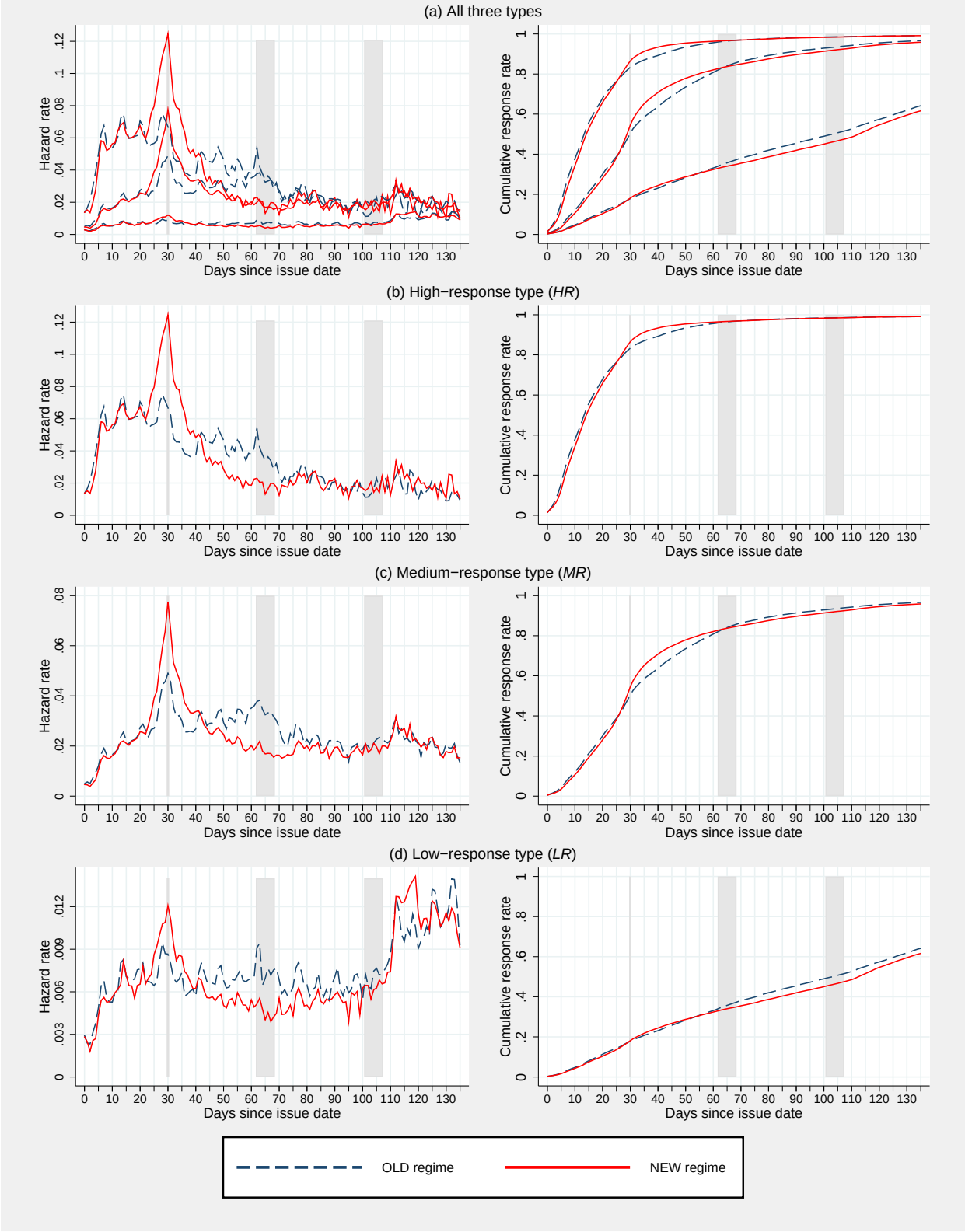
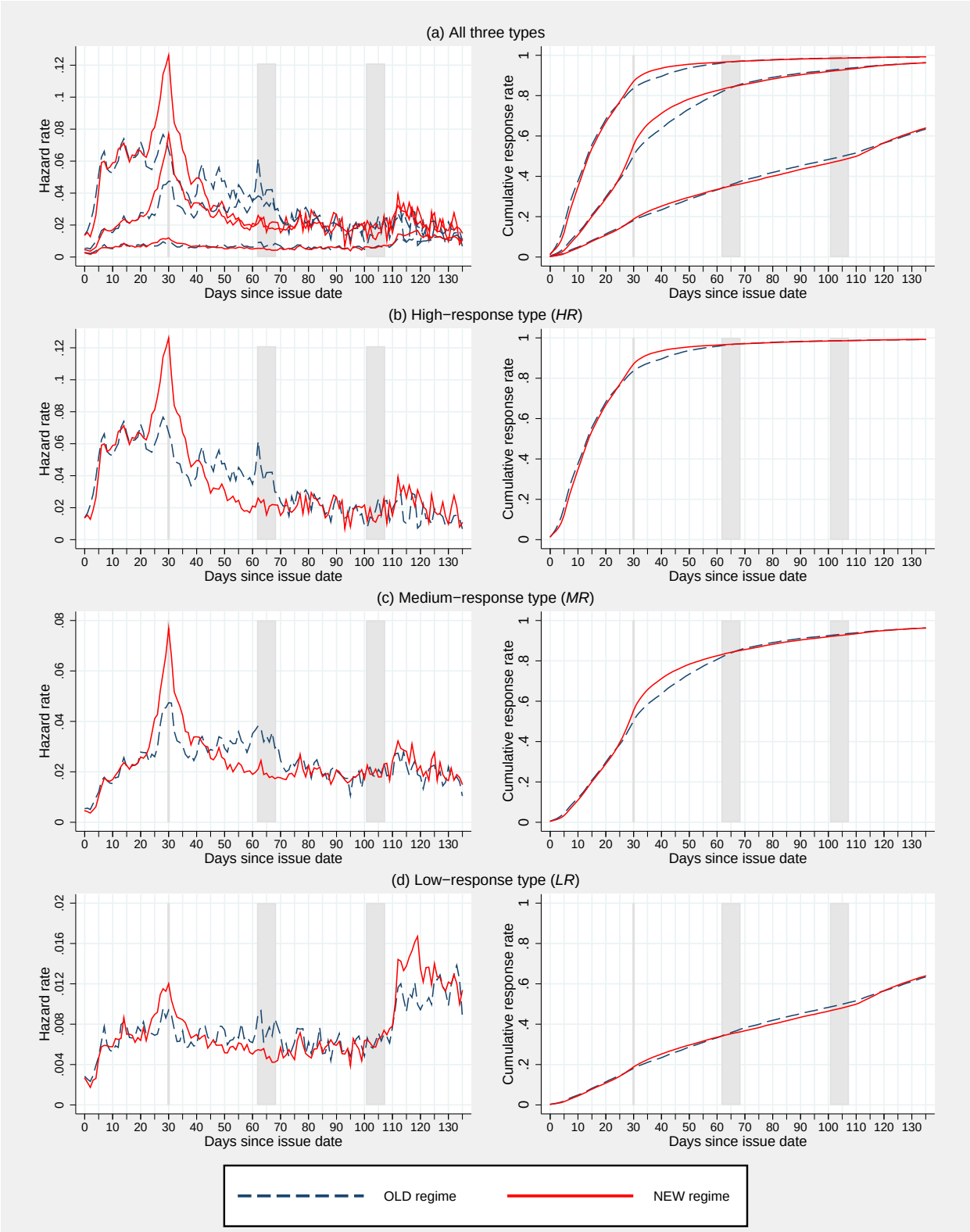


Figure A7: Reproducing Figure A6 Using a Restricted Sample



7.4 Daily hazard rates for each predicted type in EXP regime

Of the 582,065 typed plates, 78,136 also received at least one summons under the EXP regime, and those 78,136 plates received a total of 98,752 summonses under the EXP regime.[21] The following table presents the distribution of those summonses across the eight experimental cells:

		EXP Letter 1.5	
		No	Yes
NEW Letter 1	Control	13,833	5,804
	Info	28,008	11,561
	Scary	13,899	5,849
	Info & Scary	13,887	5,911

Using data from these 98,752 summonses, we estimate daily hazard rates and cumulative response rates in each of the eight experimental cells. Figure A8 presents, for each type, the daily hazard rates and cumulative response rates in each of the four experimental cells without EXP letter 1.5. We conclude that, for each type, the four versions of NEW letter 1 lead to almost identical hazard rates. Figure A9 presents, for each type, the daily hazard rates and cumulative response rates with and without EXP letter 1.5, pooling across the four versions of NEW letter 1. Quantitatively, EXP letter 1.5 increases the net hazard rate over the duration from day 48 through day 76 from 46.8% to 51.2% for the *HR*s, from 38.8% to 47.7% for the *MR*s, and from 14.6% to 16.8% for the *LR*s.

From this analysis, we conclude that each type exhibits the main aggregate findings from Section 4.2—specifically, the content of the first letter hardly matters, and the second letter generates a noticeable additional response.

[21] This analysis uses the ex post treatment assignments for all summonses issued in the EXP regime, and not just those issued July 22, 2013 through August 10, 2013.

Figure A8: Type-Specific Hazard Rates in EXP Regime: No EXP Letter 1.5 Treatments

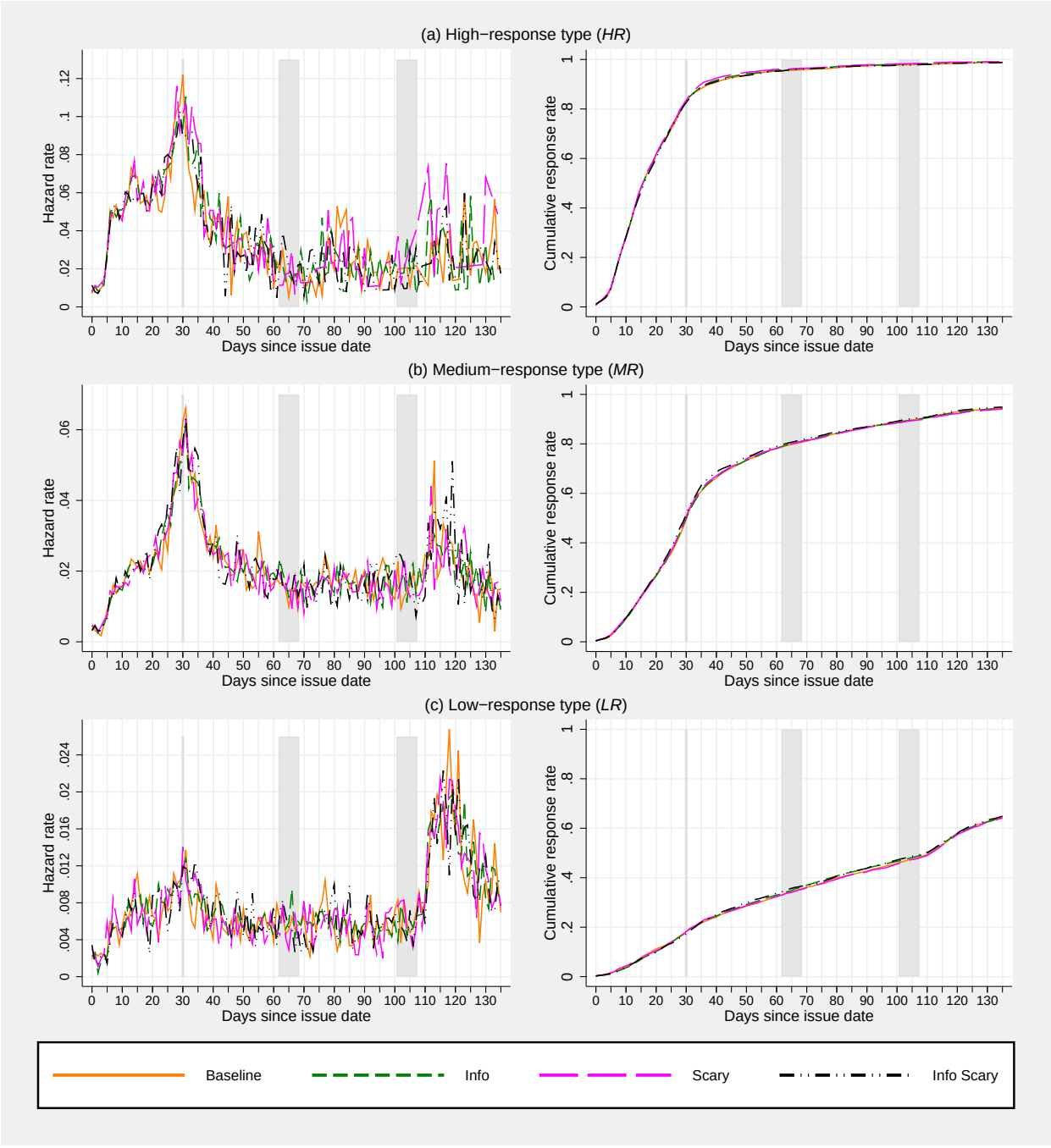
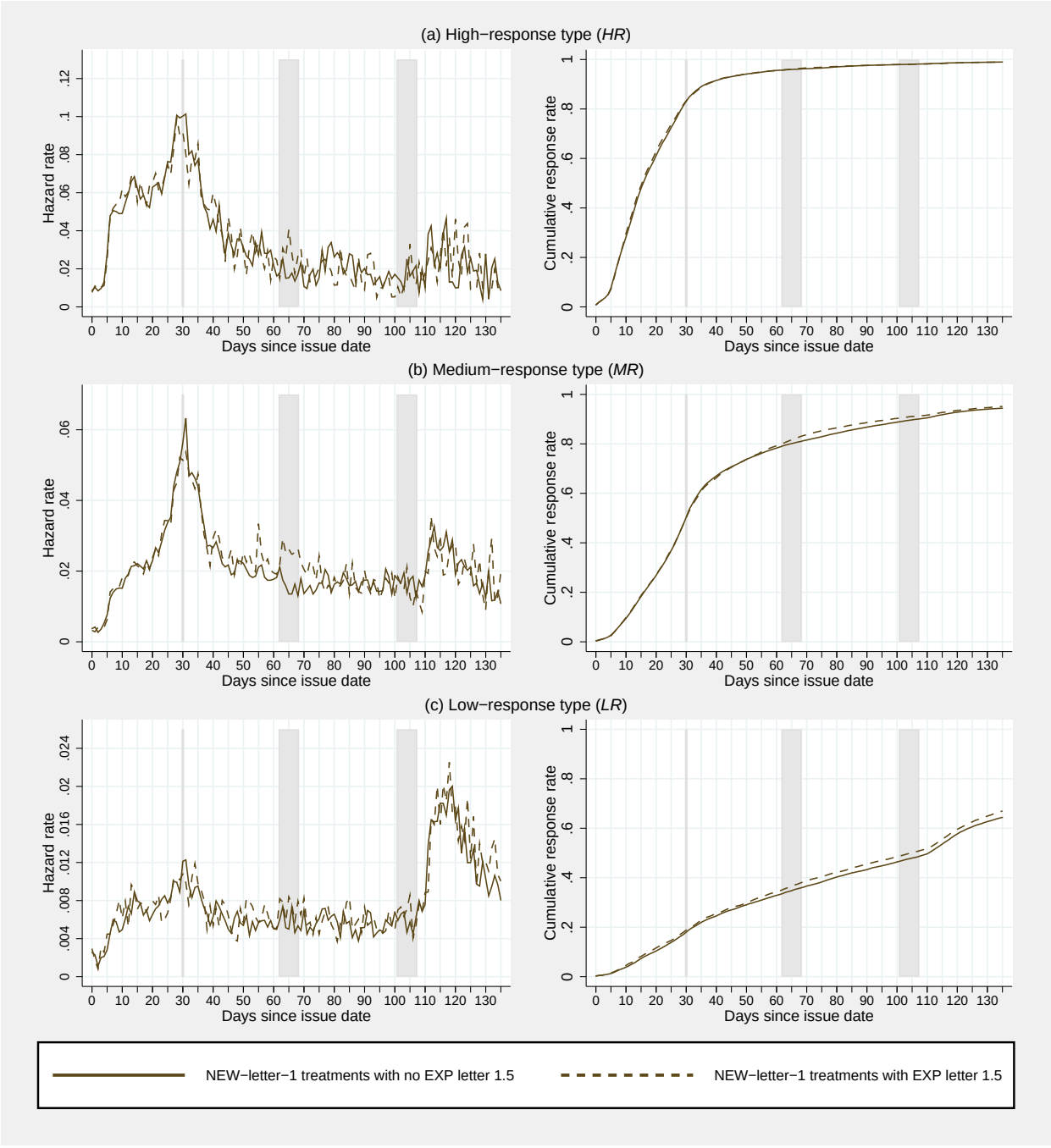


Figure A9: Type-Specific Hazard Rates in EXP Regime: EXP Letter 1.5 versus Not



8 Regressing Predicted Type on Observables

In this appendix, we provide the details behind our analysis in Section 5.4. For any plate that received a ticket in the EXP regime for which a letter was triggered on day 18, our dataset contains an address for that plate. Using ArcGIS, we attempt to match each of those addresses to its Census block group. This matching is successful for the majority of addresses, but we drop addresses that are P.O. boxes (because the P.O. box might not be in the correct Census block group), and we drop a small percentage of addresses that do not match well to an address in ArcGIS (ArcGIS reports a score out of 100 for how well a provided address matches an address in the system, and we treat an address as a match if and only if this score is 85 or higher).

To study how predicted types are correlated with Census observables, we include each of the 657,890 plates from the estimation sample (recall that these are all plates that received $J \in \{3, 4, ..., 12\}$ tickets across the OLD and NEW regimes combined) that also have a matched address (recall that a necessary condition to have a matched address is that a plate in the estimation sample also received at least one ticket in the EXP regime, and the vast majority of the eliminated plates are due to not receiving any tickets during the EXP regime). This results in 60,529 plates. Table A11 lists the Census variables that we use, along with descriptive statistics for these 60,529 plates (some of these descriptive statistics are presented in Table 6).

The dependent variables for the two regressions below are the predicted likelihood that a plate is type LR (i.e., $\hat{\pi}(LR|\boldsymbol{\theta}^i)$) and the predicted likelihood that a plate is type HR (i.e., $\hat{\pi}(HR|\boldsymbol{\theta}^i)$). However, because we have an address only if a plate has a ticket in the EXP regime that is not paid before a letter is triggered on day 18, there is some selection toward the lower-response types among those for whom we have an address. To correct for this selection, we further update $\hat{\pi}(LR|\boldsymbol{\theta}^i)$ and $\hat{\pi}(HR|\boldsymbol{\theta}^i)$ based on behavior during the EXP regime.

Specifically, because the EXP regime is identical to the NEW regime in period 1, we use information about whether a ticket received in the EXP regime is responded to in period 1—in other words, we take $p_1^k(\text{NEW})$ to be the probability that type k would pay in period 1 and thus be selected out of the matched dataset (for a particular ticket). Formally, define $\hat{\mathbf{n}}_i \equiv (\hat{n}_{i1}, \hat{n}_{iN})$, where $\hat{n}_{i1}$ is the number of tickets issued to plate i under the EXP regime that were responded to in period 1, and $\hat{n}_{iN}$ is the number of tickets issued to plate i under the EXP regime that were responded to later than period 1. Then the further updated ex post likelihoods can be written as

$$\tilde{\pi}(k|\boldsymbol{\theta}^i, \hat{\mathbf{n}}_i) = \frac{\hat{\pi}(k|\boldsymbol{\theta}^i) \left(p_1^k(\text{NEW})\right)^{\hat{n}_{i1}} \left(1 - p_1^k(\text{NEW})\right)^{\hat{n}_{iN}}}{\sum_{k'} \hat{\pi}(k'|\boldsymbol{\theta}^i) \left(p_1^{k'}(\text{NEW})\right)^{\hat{n}_{i1}} \left(1 - p_1^{k'}(\text{NEW})\right)^{\hat{n}_{iN}}}.$$

We then regress $\tilde{\pi}(LR|\boldsymbol{\theta}^i, \hat{\mathbf{n}}_i)$ and $\tilde{\pi}(HR|\boldsymbol{\theta}^i, \hat{\mathbf{n}}_i)$ on Census variables. Table A12 reports results from OLS regressions (regressions (1)-(4) are presented in Table 6), and Table A13 reports results from logistic regressions.

In Section 5.4, we also report the average age of cars driven by LRs versus HRs, as well as the percentage of HRs and percentage of LRs that drive new luxury makes. Of the 582,065 plates typed using $Z = 0.60$, car vintage and make are known for 75.4%. Virtually all of the other 24.6% have missing values for car vintage (and not for car make). We calculate car age directly from car vintage. We classify a make as "luxury" if the majority if its models appear in the *Consumer Reports* "Luxury Car" category. Using this approach, we classify the following makes as luxury makes: Acura, Alfa Romeo, Audi, Austin Martin, Bentley, BMW, Cadillac, Ferrari, Infiniti, Jaguar, Lamborghini, Lexus, Lincoln, Lotus, Massarati, Mercedes-Benz, Mini, Porsche, Rolls Royce, Land Rover, Saab, and Volvo.

Table A11: Descriptive Statistics for Census Variables
(60,529 Unique Plates in 9,481 Census Block Groups)

	Mean	Standard Deviation	10th Percentile	50th Percentile	90th Percentile
Median household income	44,403	24,810	18,973	39,688	72,105
Education					
Less than High School	0.27	0.16	0.08	0.25	0.50
High School	0.26	0.09	0.14	0.26	0.37
Some College	0.22	0.07	0.13	0.22	0.31
College or More	0.25	0.18	0.06	0.20	0.51
Race					
White	0.50	0.32	0.06	0.49	0.93
Black	0.25	0.31	0.00	0.08	0.81
Asian	0.08	0.12	0.00	0.04	0.24
Other	0.17	0.17	0.01	0.11	0.43
Language					
English Only	0.54	0.25	0.19	0.55	0.86
English Very Well	0.23	0.11	0.09	0.23	0.37
English Well	0.12	0.08	0.02	0.10	0.23
English Not Well	0.09	0.08	0.00	0.06	0.21
English Not At All	0.03	0.05	0.00	0.01	0.09
Transportation to Work					
Drive	0.43	0.25	0.13	0.39	0.80
Public Transportation	0.46	0.21	0.12	0.50	0.72
Other	0.11	0.10	0.02	0.09	0.22

Table A12: OLS Regressions of Likelihood of Type on Census Variables

	Dependent Variable: Likelihood Low-Response Type				Dependent Variable: Likelihood High-Response Type			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ln(median household income)	-0.029	-0.073			0.015	0.062		
	(0.006)	(0.003)			(0.005)	(0.003)		
Education (Less than High School omitted)								
High School	0.032		-0.095		-0.052		0.088	
	(0.034)		(0.026)		(0.025)		(0.020)	
Some College	0.013		0.219		-0.043		-0.129	
	(0.033)		(0.029)		(0.025)		(0.021)	
College or More	-0.085		-0.316		0.081		0.263	
	(0.026)		(0.012)		(0.019)		(0.010)	
Race (White omitted)								
Black	0.167			0.191	-0.117			-0.136
	(0.009)			(0.006)	(0.006)			(0.004)
Asian	-0.047			-0.161	0.057			0.106
	(0.017)			(0.014)	(0.015)			(0.013)
Other	0.243			0.178	-0.162			-0.161
	(0.017)			(0.011)	(0.013)			(0.008)
Language (English Only omitted)								
English Very Well	-0.055				-0.006			
	(0.021)				(0.016)			
English Well	-0.129				0.057			
	(0.031)				(0.025)			
English Not Well	-0.094				0.053			
	(0.039)				(0.031)			
English Not At All	-0.085				0.014			
	(0.071)				(0.044)			
Transportation to Work (Public omitted)								
Drive	0.122				-0.064			
	(0.011)				(0.009)			
Other	0.035				-0.05			
	(0.022)				(0.018)			
Constant	0.533	1.083	0.366	0.246	0.108	-0.465	0.133	0.246
	(0.057)	(0.036)	(0.011)	(0.003)	(0.044)	(0.029)	(0.008)	(0.003)
Number of Observations	60,529	60,529	60,529	60,529	60,529	60,529	60,529	60,529
R^2	0.04	0.01	0.02	0.03	0.04	0.01	0.02	0.03

Notes: OLS regressions with standard errors clustered at the block group level (9,481 block groups).

Table A13: Logistic Regressions of Likelihood of Type on Census Variables

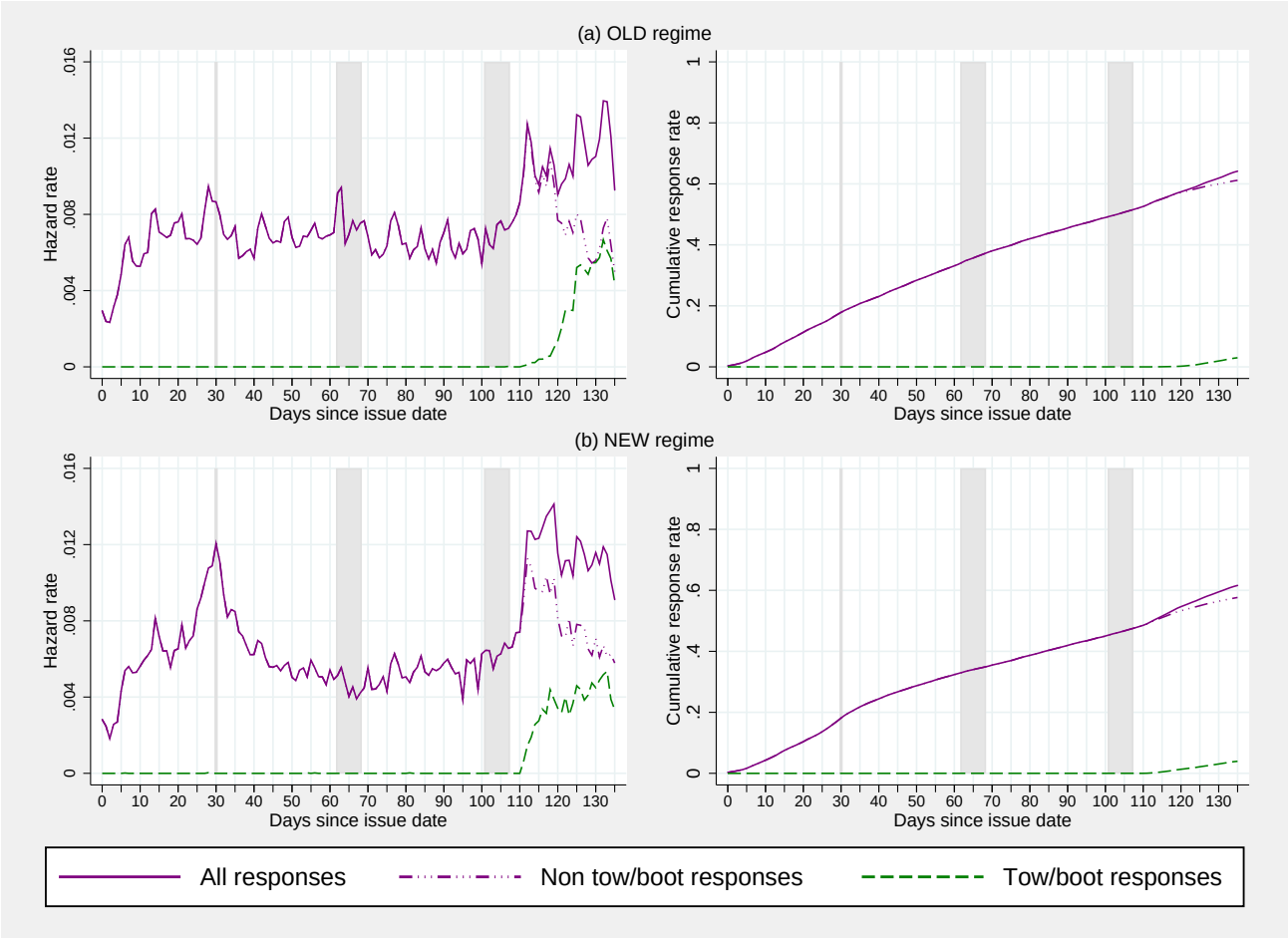
	Dependent Variable: Likelihood Low-Response Type					Dependent Variable: Likelihood High-Response Type				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ln(median household income)	0.874		0.710			1.117		1.502		
	(0.024)		(0.012)			(0.035)		(0.027)		
Median Household Income x 10^{-4}		0.969					1.024			
		(0.006)					(0.006)			
Education (Less than High School omitted)										
High School	1.190	1.046		0.704		0.740	0.827		2.042	
	(0.192)	(0.165)		(0.086)		(0.129)	(0.140)		(0.272)	
Some College	1.122	0.979		3.058		0.830	0.930		0.479	
	(0.173)	(0.146)		(0.413)		(0.137)	(0.148)		(0.066)	
College or More	0.623	0.604		0.202		1.543	1.582		4.998	
	(0.077)	(0.072)		(0.012)		(0.197)	(0.188)		(0.308)	
Race (White omitted)										
Black	2.133	2.138			2.365	0.433	0.429			0.384
	(0.088)	(0.089)			(0.066)	(0.020)	(0.019)			(0.013)
Asian	0.752	0.728			0.415	1.371	1.411			1.821
	(0.070)	(0.068)			(0.033)	(0.118)	(0.121)			(0.122)
Other	3.242	3.225			2.358	0.348	0.351			0.358
	(0.271)	(0.269)			(0.115)	(0.031)	(0.031)			(0.020)
Language (English Only omitted)										
English Very Well	0.792	0.783				1.006	1.010			
	(0.079)	(0.079)				(0.103)	(0.104)			
English Well	0.535	0.519				1.46	1.475			
	(0.083)	(0.080)				(0.226)	(0.228)			
English Not Well	0.635	0.627				1.425	1.418			
	(0.123)	(0.121)				(0.284)	(0.282)			
English Not At All	0.659	0.629				1.077	1.093			
	(0.226)	(0.216)				(0.317)	(0.321)			
Transportation to Work (Public omitted)										
Drive	1.829	1.862				0.670	0.655			
	(0.101)	(0.105)				(0.039)	(0.039)			
Other	1.143	1.175				0.716	0.700			
	(0.128)	(0.132)				(0.080)	(0.078)			
Constant	1.206	0.357	16.615	0.566	0.331	0.118	0.325	0.003	0.153	0.332
	(0.319)	(0.039)	(2.842)	(0.028)	(0.006)	(0.037)	(0.038)	(0.001)	(0.009)	(0.006)
Number of Observations	60,529	60,529	60,529	60,529	60,529	60,529	60,529	60,529	60,529	60,529

Notes: Logistic regressions with standard errors clustered at the block group level (9,481 block groups).

9 Tow/Boot Results By Regime

Figure 8 in Section 5.5 uses all 141,959 tickets for the *LR*s in the holdout sample, pooling them across regimes. Below, we present regime-specific versions of Figure 8. For the OLD-regime figure, this is based on 76,836 tickets, and for the NEW-regime figure, this is based on 65,123 tickets.

Both regimes exhibit the two key patterns emphasized in Section 5.5: (i) shortly after day 110 we start to see responses that follow a tow or boot, and by day 135 nearly 50% of responses from the *LR*s follow a tow or boot; and (ii) aggregate response rates shift upward right at the time letter 3 is received, and before there is any significant towing/booting.



10 Reduced-Form Heterogeneity Analysis

In Section 5, we take a structural approach to our analysis of heterogeneity. Specifically, we imagine an underlying model in which each type is characterized by a survival function (or, equivalently, by a set of daily hazard rates), where this survival function might depend on the regime. Based on this conceptualization, we estimate a model with (a simplified version of) this structure. We then use this estimated model to carry out four exercises: (i) we study the estimated type-specific response patterns (in Table 5), (ii) we assign each plate to its best-fit type and then study response behavior by type in the holdout sample (in Figures 6 and 7), (iii) we study which demographic variables seem to be associated with the plates predicted to be *LR*s (in Table 6), and (iv) we study the impact of towing and booting on the plates predicted to be *LR*s (in Figure 8).

In this appendix, we provide an alternative, reduced-form approach to this analysis. Our goal is to demonstrate that our results and conclusions are much the same. In the process, we also highlight some limitations of a reduced-form approach and why we prefer our more structural approach.

We begin with a reduced-form approach to exercise (ii) above. Much as in Section 5.3, the basic idea is to assign plates to types based on their response behavior in the estimation sample (2,708,255 tickets issued to 657,890 plates), and then to study the behavior of the different types in the holdout sample. However, instead of assigning types based on a structural model, we merely use a reduced-form statistic of observed behavior: specifically, a plate's median response time on its tickets in the estimation sample.

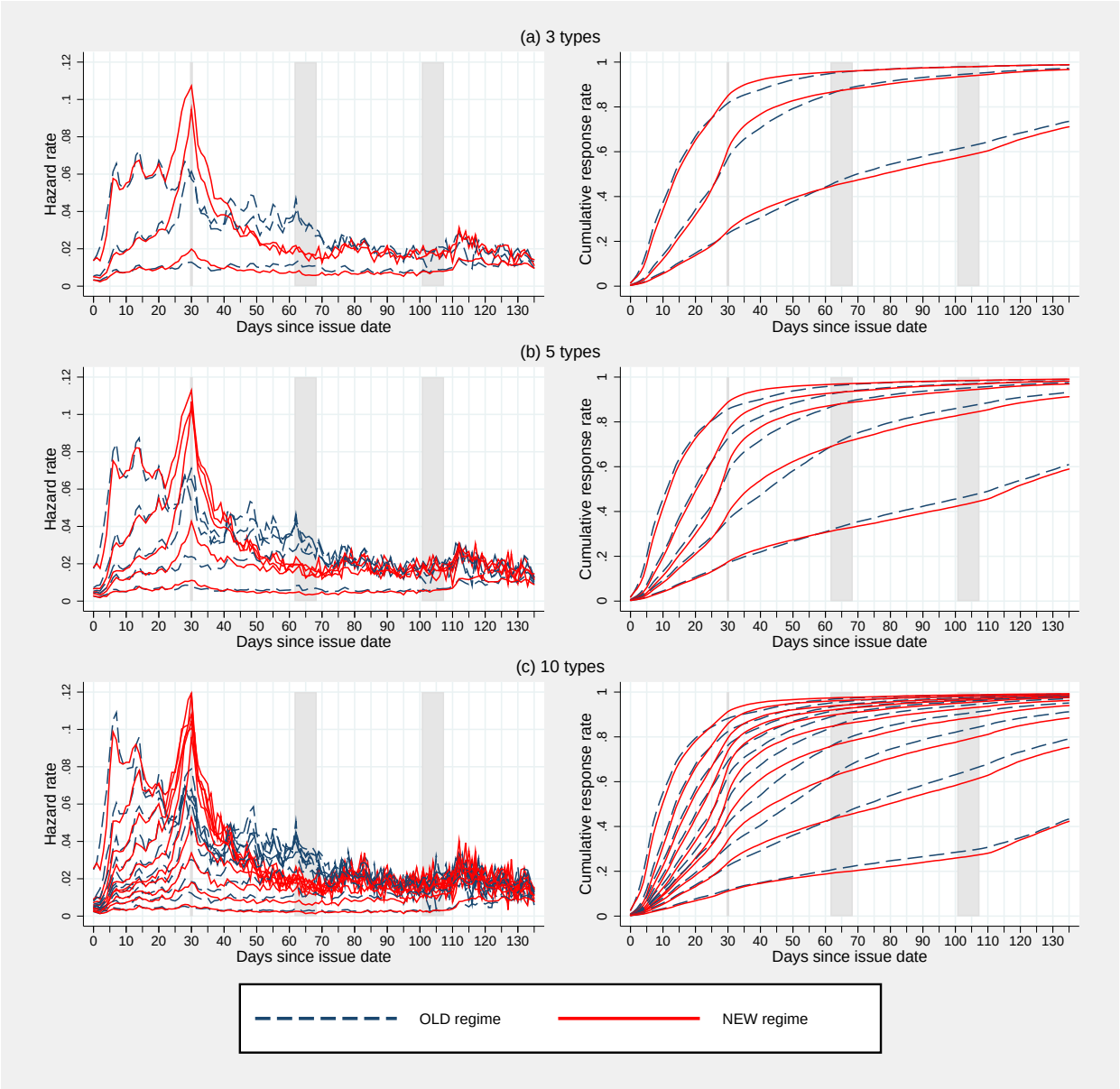
For each plate, we create a median-days-to-first-response variable by pooling that plate's estimation-sample tickets in both the OLD and NEW regimes.[22,23] We then split plates into types based on quantiles of this variable, and study response behavior by type in the holdout sample (analogous to Figure 6). Figure A10 depicts response behavior by type when we split plates into types by tertiles, quintiles, and deciles. Figure A10 yields a message much the same as Figure 6. The highest- and middle-response types behave qualitatively the same, with higher-response types being more prone to act sooner, and all of these types reacting strongly to the notification letters. The lowest-response types, in contrast, exhibit

[22] When calculating this median, any first response after day 135 is coded as 135. For the 657,890 plates in the estimation sample, descriptive statistics are: mean 44, median 29, standard deviation 39, 10th percentile 10, and 90th percentile 119.

[23] This variable ignores the fact that plates have different proportions of OLD-regime vs. NEW-regime tickets, which is in principle problematic given that days to first response depends on regime. This issue reflects one limitation of reduced-form approaches: if one does not make any assumptions about the underlying structure, it is difficult to create a reduced-form statistic that would account for the different proportions of OLD-regime vs. NEW-regime tickets. In contrast, our structural approach fully accounts for these different proportions (although with assumptions about the underlying structure).

very low and relatively flat response rates from day 0 through the third deadline, with barely noticeable reactions to the notification letters, much as in Figure 6. Finally, analogous to the discussion of Figure 6 in Section 5.5, the lowest-response types show their highest response rates after day 110.

Figure A10: Response Behavior by Reduced-Form Predicted Type



There is one exception to our conclusion that Figure A10 yields a message much the same as Figure 6: In the three-type model, the low-response types exhibit a more sizable reaction to NEW letter 1 (this noticeable response does not appear for the lowest-response

types in the five- or ten-type models). We believe this finding mostly reflects one of the limitations of the reduced-form approach: by its nature, the reduced-form approach assigns equal proportions (or at least exogenously imposed proportions) to each type, whereas a structural model can estimate the proportions of each type. Here, whereas the reduced-form three-type model assumes 33% of the population are low-response types, the structural three-type model estimates that only 25% of the population are low-response types. Hence, one reason for the observed stronger response to NEW letter 1 by low-response types in Figure A10a is that the low-response types include some underlying medium-response types.

We next move on to a reduced-form approach to exercise (iii) above. Much as in Section 5.4, the basic idea is to regress a continuous measure of a plate's type on the Census demographic variables. In Table 6, that continuous variable is the predicted probability that a plate is a low-response type (and Appendix 8 also uses the predicted probability that a plate is high-response type). As a reduced-form alternative, we again use a plate's median response time on its tickets in the estimation sample.[24]

Table A14 presents OLS regressions using median days to first response as the dependent variable. Column (1) presents estimates when we include all of the Census variables in a single regression. The qualitative results are much the same as in regression (1) of Table 6: a plate is predicted to be lower-response type (larger median days to first response) when the owner lives in a Census block group that has lower income, a higher proportion with race either "black" or "other," and a higher proportion that drive to work. The education results are more mixed than in regression (1) of Table 6.

To further explore the theme that the low-response types, who are people accumulating significant late penalties, seem more likely to come from already disadvantaged groups, columns (2)-(4) present estimates with only income, only education, or only race included. Again, the qualitative results are much the same as Table 6. Consider the two examples from Section 5.4 using the estimates from columns (2) and (4) of Table A14. Suppose all we know is that a plate comes from a Census block with median income at the 10th percentile ($18,973) rather than at the 90th percentile ($72,105). The predicted median days to first response for that plate is 22% higher (55.5 days versus 45.4 days). Analogously, suppose all we know is that a plate comes from a Census block with proportion black at the 90th percentile (0.81) rather than at the 10th percentile (0.00), with the remainder assumed to be white. The predicted median days to first response for that plate is 36% higher (59.4 days versus 43.6 days).

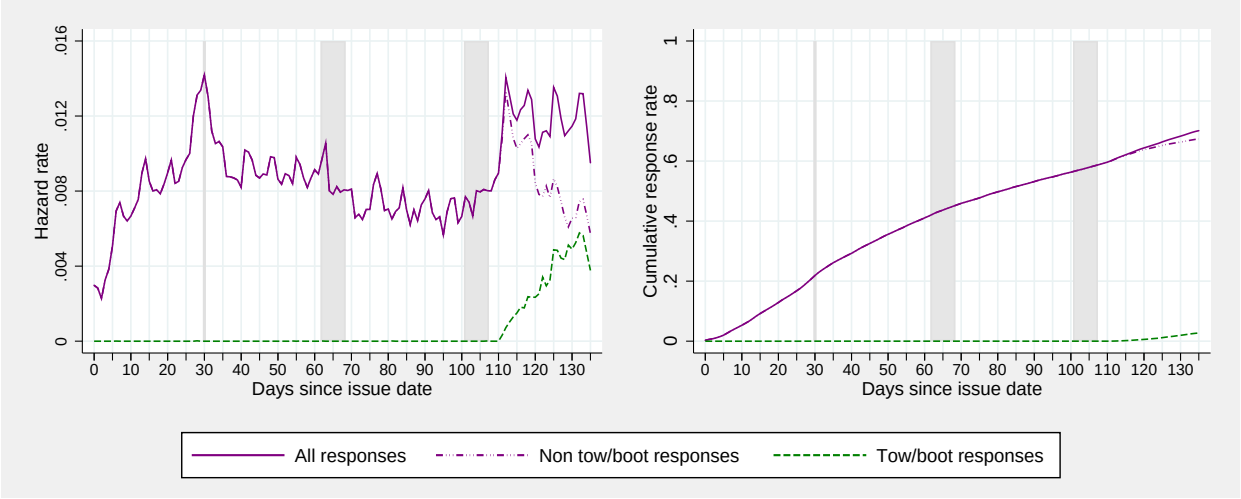
As we discuss in Section 5.4 and Appendix 8, there is a sample-selection issue in that we

[24] For the 60,529 plates for which we have a matched address, descriptive statistics are: mean 50, median 34, standard deviation 39, 10th percentile 14, and 90th percentile 124.

observe an address (and thus the Census variables) only if one receives a ticket in the EXP regime and does not respond prior to a letter being triggered on day 18. In our structural approach, the structure of the model tells us exactly how to correct for this sample-selection issue, and we do so before running the regressions in Table 6 (and Appendix Tables A12 and A13). Another limitation of the reduced-form approach is that it is not clear how one could reasonably correct for this issue.

We now consider a reduced-form approach to exercise (iv) above. Much as in Section 5.5, the basic idea is to take some group of low-response types and to study hazard rates and cumulative response rates for that group while disaggregating responses into those that occur after towing/booting and those which do not. In Figure 8, we used plates predicted to be low-response types given the three-type structural model. Here, we merely use the bottom third of the distribution of median days to first response in the estimation sample (so aggregate responses for this group correspond to the low-response type in Figure A10a). Figure A11—based off 216,051 tickets issued to 216,051 plates in the holdout sample, pooled across regimes—reveals that this group exhibits the two key patterns emphasized in Section 5.5: (i) shortly after day 110 we start to see responses that follow a tow or boot, and by day 135 nearly 50% of responses from low-response types follow a tow or boot; and (ii) aggregate response rates shift upward right at the time letter 3 is received, and before there is any significant towing/booting.

Figure A11: Tow/Boot versus Non-Tow/Boot Responses for Reduced-Form Low-Response Type



Finally, we note that a reduced-form approach does not permit an analogue to exercise (i) above, where we get estimates of response patterns of the "true" (according to the model)

underlying types. To illustrate, suppose the "true" underlying model is a three-type model with equal proportions of each type (to abstract from the limitation discussed above that a reduced-form approach might have the incorrect proportions). Even in this world, the type-specific hazard rates in the three-type reduced-form model (as in Figure A10a) will reflect biased estimates of the hazard rates of the underlying types, because the underlying model implies that, from a finite sample, some high-response types will exhibit large median days to first response (due to bad luck), and some low-response types will exhibit small median days to first response (due to good luck). The structural approach accounts for this—again, under the assumption that the assumed model is "correct"—and thus can yield estimates of hazard rates for the underlying types.

To summarize, we have highlighted above a number of limitations of the reduced-form approach, and in light of these limitations and the fact that the structural approach is in principle the correct approach given our underlying conceptualization, we pursue the structural approach in the main text. However, because results from a structural approach are only as good as the structural assumptions that underlie it, we are comforted by the fact that the reduced-form approach yields identical qualitative conclusions.

Table A14: Regressions of Median Days to First Response on Census Variables

	Dependent Variable: Median Days to First Response			
	(1)	(2)	(3)	(4)
ln(median household income)	-3.300	-7.507		
	(0.563)	(0.338)		
Education (Less than High School omitted)				
High School	5.215		-8.436	
	(3.288)		(2.568)	
Some College	4.432		24.321	
	(3.146)		(2.754)	
College or More	-7.421		-32.176	
	(2.428)		(1.186)	
Race (White omitted)				
Black	17.503			19.533
	(0.866)			(0.597)
Asian	-4.838			-15.896
	(1.598)			(1.295)
Other	23.616			17.557
	(1.643)			(1.018)
Language (English Only omitted)				
English Very Well	-4.674			
	(1.967)			
English Well	-12.682			
	(2.902)			
English Not Well	-8.347			
	(3.820)			
English Not At All	-3.936			
	(6.190)			
Transportation to Work (Public omitted)				
Drive	13.529			
	(1.087)			
Other	5.386			
	(2.045)			
Constant	73.506	129.402	55.049	43.614
	(5.579)	(3.594)	(1.071)	(0.326)
Number of Observations	60,529	60,529	60,529	60,529
R^2	0.05	0.01	0.02	0.04

Notes: OLS regressions with standard errors clustered at the block group level (9,481 block groups).

11 Additional Details about the Data

In this appendix, we discuss some further details about the data. Specifically, we describe the details of how the data came to us and the steps we took to create the *summonses database* and the *events database*. We also clarify how we created several new variables: *violation type*, *event type*, *payment type*, and *first response type*. Finally, we describe the cost-benefit calculations reported in Section 6.

Creation of the summonses database and the events database:

Details of the data dumps: The data we use come from six different data dumps (.csv files that we received from DOF), where each data dump contains a summonses file (s) and an events file (e). Our code converts the raw (.csv) files into STATA (.dta) files, keeping only a (pretty large) subset of the variables. Here are the details:

Date Received	.csv: # lines+2 (s; e)	.dta: # (vars)obs (s; e)
Jun 2012	9,777,757; 19,828,439	(96)9,777,755; (17)19,828,437
Sep 2012	3,019,402; 9,748,519	(108)3,019,400; (18)9,748,517
Mar 2013	16,868,548; 34,101,207	(96)16,868,546; (17)34,101,205
Sep 2013	4,962,942; 16,429,705	(96)4,962,940; (17)16,429,703
Nov 2013	1,358,645; 4,943,595	(96)1,358,643; (17) 4,943,593
Jan 2014	3,014,406; 11,130,013	(96)3,014,404; (17)11,130,011

We append together the summonses files into one large summonses file, and append together the events files into one large events file. Finally, we drop duplicates from each file (which exist due to date overlaps across the dumps).

> Comment: The Jun 2012 and Sep 2012 summonses files are not needed because the Mar 2013 summonses file includes data starting from May 2011 (almost two years of data) and indeed, it includes virtually all of the summonses in the Jun 2012 and Sep 2012 summonses files. This is fortunate because the Sep 2012 summonses file had no quotes ("), which created problems for some of the observations—note that in the table above, it has 108 variables, where the last 12 are created from miscoded records. The Sep 2012 events file is also not needed. But the Jun 2012 events file is used because the large Mar 2013 events file contains only events that are less than roughly one-year old for some of its summonses.

Summonses database: We append together the Mar 2013, Sep 2013, Nov 2013, and Jan 2014 summonses files, for a total of 26,204,533 summonses. Dropping summonses with obviously wrong issue date (because it is in the future relative to when we got the file, but then we also drop that summons from future data dumps even if it is no longer in the future relative to when we got them—its issue date seems still wrong), we are left with 26,179,057 observations (which still contain duplicates). These cover May 1, 2011 to roughly Jan 20, 2014, although we may be missing some observations in late Jan 2014, and we most certainly are missing much of the two days of summonses Feb 27-28, 2013. Dropping duplicates (which result from overlapping dates across the data dumps), and we are left with 25,603,370 unique summonses.

Events database: We append together the Jun 2012, Mar 2013, Sep 2013, Nov 2013, and Jan 2014 events files, for a total of 86,432,949 events. We drop events that do not match any summonses in our data (0.98%, virtually all of them are posted March 1, 2013), and are left with 85,583,227 events. Dropping duplicates, we are left with 69,482,623 unique events, all of which have a matching summons in the summonses database. Notice that our algorithm for cleaning the events files is different from that for cleaning the summonses files. In the latter, we eliminated those with suspect issue date, then dropped duplicates. In the former, we eliminated those with no matching summons, then dropped duplicates, but did not drop those with suspect event dates, although there seem to be perhaps a few thousands of them (out of 85 million).

Finally, we further keep summonses only if the issue date is between June 1, 2011 and August 31, 2013 and there is at least one event between June 1, 2011 and January 31, 2014. We are left with 20,874,688 summonses and their 58,754,456 events.

Creation of new variables:

Violation type: This variable is the violation code number published on DOF's website. A list of the codes (downloaded 05/27/2015) appears in Appendix 12.

Event type: Event type is constructed from a number of different variables in the events database, where different variables are used for different types of events. Here we provide some of the relevant detail, and in particular how we created some of the specific event type variables that we use.

Payment type: This variable is the method of the first payment, which we categorize into by mail, online, by phone, in person, or unknown. This is constructed from the *payment_source* events variable, for which the entries are 3-letter codes. Based on conversations with DOF, we categorized these 3-letter codes as follows:

- Payments by mail:
  - BOX — Lockbox
- Payments online:
  - CPR — CityPay Online Payment System
  - WWW — Internet Source
- Payments by phone:
  - IVR — Interactive Voice Recognition
  - PLK — Paylock (payment to remove boot)
- Payment in person:
  - BBC — Payments at the Brooklyn Business Center
  - MBC — Payments at the Manhattan Business Center
  - QBC — Payments at the Queens Business Center
  - SBC — Payments at the Staten Island Business Center
  - XBC — Payments at the Bronx Business Center
  - EMS — Enforcement Marshall and Sheriff Unit (tow redemption)
  - KSK — Kiosk Payment
  - MDC — Department of Consumer Affairs Manhattan Payment Center
- Unknown code:
  - WEB — The code suggests internet, but includes cash payments.
  - XXX

First response type: This variable is the form of the first response, which we code into three values: payment, contest, or settlement. This coding was somewhat complicated, and so we go into some detail below.

The first step is to identify payment events, contest events, and settlement events, regardless of timing.

Payment events: Payment events are the easiest to code—any event that has a *key_code* that starts with "PS" is coded as a payment event. (Note: Other *key_codes* that start with "P" are payment adjustments, such as when a driver overpaid on another ticket and the excess is applied to the current ticket. Adjustments are rare—they account for 0.57% of all "P" events.)

Contest events: Contests are not recorded as events in the system that generates our data (they are tracked by another system, to which we have no access). But contests trigger other events, and those are recorded in our data. As a result, we identify contest events using the following set of criteria:

> "Holds": When a contest is made via internet or mail, a "hold" is entered into the system so that penalties are not applied. Hence, any event that has a *key_code* that starts with "H" is coded as a contest event, except "H" events that have *db_reason_code* of "OHPW", which are holds that seem to be placed by the system in the NEW regime as a workaround to prevent the day 35-41 letter from being sent.
>
> "Dispositions": The outcome of a contest is called a "disposition." Dispositions are sometimes made immediately—e.g., for in-person contests or for the settlement program—and they sometimes occur with a lag. Hence, any event that has a *key_code* that starts with "D" is coded as a contest event, except for events with the *key_code* "D0B6", which are internal processing adjustments to penalties (e.g., if a payment arrives before a deadline but is entered into the system after a penalty has been imposed, this code is used to cancel the penalty).

Settlement events: Settlement events—which are settlements under the settlement program that was in place prior to February 1, 2012—are a subset of contest events. Specifically, all events with a *db_key_event_source* of "SMT" are coded as settlement events. All of these have a *key_code* that is a "D" event, because the settlement program provides an immediate disposition.

Having identified payment events, contest events, and settlement events, the final step is to code the first response. See Appendix 2 for details.

Finally, we mention two further details with regard to first responses. First, we note that tickets paid by mail are given an additional three days grace period to allow for mail transit time, and payments are recorded on the day that the payment arrived. For the other three payment methods, payments are recorded on the day that payment is made. We ignore

this difference in our analysis because it is unlikely to impact our comparison of behavior across regimes. Second, it is worth noting that, once a driver contests a ticket, the timing of subsequent deadlines and notification letters deviates from the timeline in Table 2. Our analysis of first responses is unaffected by this.

Tow/boot response versus non-tow/boot response: This binary variable indicates whether or not a response comes after the ticketed vehicle has been towed or booted (after a default judgment has been entered against the owner of the vehicle). The value of this variable is determined using the variable *db_reason_code*. Specifically, any towed vehicle was handled by the Sheriff & Marshall Unit, and any booted vehicle was handled by Paylock, a private company.[25] Using the descriptions of the reason codes along with the event sources (e.g., if an event has a *db_key_event_source* of "PLK", which stands for Paylock, it represents a payment to Paylock), we conclude that the following reason codes are associated with booting or towing:

Booting *db_reason_code*: 2370, 2371, 2374, 2375

Towing *db_reason_code*: 2148, 2149, 2300, 2302, 2303, 2304, 2340, 2341, 2342, 2376, 2380, 2381, 2382, 2384

Hence, any first-response with one of these reasons is coded as a tow/boot response, and all other first-response events are coded as a non-tow/boot response. There is one possible issue here: it could be that some people respond to a tow/boot in an atypical way—that is, by not directly communicating with the Sheriff & Marshall Unit or with Paylock, which is what must be done to release the vehicle. We do not know the extent to which such alternative routes are possible, but we believe there would be few such instances.

Cost-benefit calculations reported in Section 6:

In Section 6, we report a rough quantification of the direct monetary implications of moving from the OLD regime to the NEW regime, specifically calculating rough estimates for (i) the monetary costs of sending extra notification letters in the NEW regime (relative to what is sent in the OLD regime) and (ii) the monetary reduction in first penalties paid in the NEW regime (relative to what is paid in the OLD regime). These calculations are summarized in Table A15—see table notes for some of the details behind these calculations.

[25] This excludes towing related to illegal parking that occurs at the time the ticket is issued, which is handled by NYPD. Such tickets would appear in the data as one of the NYPD-issued tickets, and our results are robust to dropping all NYPD-issued tickets.

Table A15: Cost-Benefit Analysis of OLD vs. NEW Regime (for Section 6)

					Impact of NEW Regime (Relative to OLD)	
Group	Assumed Tickets Per Year	Regime	Tickets with First Letter (%)	Tickets with First Penalty (%)	Cost of Additional Notification Letters	Reduction in First Penalites
Aggregate	3,000,000	OLD	45.08	45.13	$368,550	$1,776,000
		NEW	69.65	39.21		
HRs (33.8%)	1,014,000	OLD	15.37	15.38	$143,582	$501,930
		NEW	43.69	10.43		
MRs (41.3%)	1,239,000	OLD	45.54	45.60	$203,630	$951,552
		NEW	78.41	37.92		
LRs (24.9%)	747,000	OLD	82.31	82.45	$36,342	$210,654
		NEW	92.04	79.63		

Notes:

Tickets with First Letter (%) and Tickets with First Penalty (%) reflect first letters actually being sent and first penalties actually being imposed, which might differ from that implied by response period for reasons outlined in Appendix 2. Aggregate percentages based on 6,375,451 tickets in the core dataset issued in the OLD or NEW regime; type-specific percentages based on 210,825, 229,821, and 141,959 tickets in the holdout sample for high-response, medium-response, and low-response plates that were typed from the mixture model.

Assumed Tickets Per Year for aggregate based on there being roughly 3 million tickets per year in core dataset; for each type, it is the aggregate value mutliplied by that type's proportion of the population (from Table 5 and listed above).

Cost of Additional Notification Letters in NEW regime (relative to OLD regime) is merely the difference in percent of tickets with a first letter times assumed tickets per year times $0.50 per letter.

Reduction in First Penalties in NEW regime (relative to OLD regime) is merely the difference in percent of tickets with a first penalty times assumed tickets per year times $10 per penalty.

For Tickets with First Letter and Tickets with First Penalty, the type-specific values do not average to the aggregate value because different samples are used. As a result, for Cost of Additional Notification Letters and Reduction in First Penalties, the type-specific values do not sum to the aggregate value.

12 Violation Codes

The following pages provide a list of violation codes downloaded from the NYC Department of Finance website on May 27, 2015. While these codes were downloaded after the end of our dataset, they match the codes, fine amounts, and violation descriptions in our dataset.

Finance
Jacques Jiha, Ph.D.
Commissioner

CommercialDisputeServicesForms
Select

- Auctions
- Booting
- Get a Copy of a Ticket
- Payment Plans
- Proof of Satisfaction
- Refunds
- Towed Vehicles
- Violation Codes, Fines, Rules and Regulations

Violation Codes, Fines, Rules & Regulations

The table below defines the parking violation codes in New York City and lists the fines. Each fine amount includes a $15 New York State Criminal Justice surcharge. Rules & Regulations Violation Codes [01-20] [21-30] [31-40] [42-50] [51-60] [61-70] [71-80] [81-99]

CODE	DEFINITION	Manhattan	96th St. & below All Other Areas
01	Failure of an intercity bus to prominently display a copy of an intercity bus permit.	$515	$515
02	Failure of an intercity bus to properly display the operator's name, address and telephone number.	$515	$515
03	Intercity bus unauthorized passenger pickup or discharge	$515	$515

04	Vehicles parked illegally south of Houston Street in Manhattan in metered spaces reserved for buses from 7am - 7pm daily. Vehicles with bus plate types parked longer than the 3 hour maximum and/or not displaying a DOT-issued bus permit.	$115	--
05	Failure to make a right turn from a bus lane.	$115	$115
06	Parking a tractor-trailer on a residential street between 9PM and 5AM.	1st Offense - $265 2nd Offense - $515	
07	Vehicles photographed going through a red light at an intersection	$50	$50
08	Vehicle idling in a restricted area.	$115	$115
09	Blocking an Intersection: Obstructing traffic at an intersection also known as "Blocking the Box".	$115	$115
10	Stopping, standing or parking where a sign, street marking, or traffic control device does not allow stopping.	$115	$115
11	Hotel Loading/Unloading: Standing or parking where standing is not allowed by sign, street marking or; traffic control device.	$115	$115
12	Snow Emergency: Standing or parking where standing is not allowed by sign, street marking or; traffic control device.	$95	$95
13	Taxi Stand: Standing or parking where standing is not allowed by sign, street marking or; traffic control device.	$115	$115
14	General No Standing: Standing or parking where standing is not allowed by sign, street marking or; traffic control device.	$115	$115
16	Truck Loading/Unloading: Standing or parking where standing is not allowed by sign, street marking or; traffic control device.	$95	$95
17	Authorized Vehicles Only: Standing or parking where standing is not allowed by sign, street marking or; traffic control device.	$95	$95
18	Bus Lane: Standing or parking where standing is not allowed by sign, street marking or; traffic control device.	$115	$115
19	Bus Stop: Standing or parking where standing is not allowed by sign, street marking or; traffic control device.	$115	$115
20	General No Parking: No parking where parking is not allowed by sign, street marking or traffic control device.	$65	$60
21	Street Cleaning: No parking where parking is not allowed by sign, street marking or traffic control device.	$65	$45
22	Hotel Loading/Unloading: No parking where parking is not allowed by sign, street marking or traffic control device.	$60	$60
23	Taxi Stand: No parking where parking is not allowed by sign, street marking or traffic control device.	$65	$60
24	Authorized Vehicles Only: No parking where parking is not allowed by sign, street marking or traffic control device.	$65	$60
25	Standing at a commuter van stop, other than temporarily for the purpose of quickly picking up or dropping off passengers.	$115	$115
26	Standing at a for-hire vehicle stop, other than temporarily for the purpose of quickly picking up or dropping off passengers.	$115	$115
27	No parking in a zone reserved for people with disabilities (off-street only) where parking is not allowed by sign, street marking or traffic control device	$180	$180

	(Note: Includes a $30 New York State Criminal Justice surcharge.)		
28	Overtime standing (diplomat)	$95	$95
29	Altering an intercity bus permit	$515	$515
30	Stopping or standing by an intercity bus in its assigned on-street bus stop location other than when actively engaged in the pick-up or discharge of its passengers	$515	$515
31	Standing of a non-commercial vehicle in a commercial metered zone.	$115	$115
32	Parking at a broken or missing meter for longer than the maximum time permitted.	$65	$35
33	"Feeding Meter" -- parking in a metered space for a consecutive period of time longer than allowed, whether or not an additional coin or coins are deposited or another method of payment is used.	$65	$35
34	Expired Meter -- parking in a metered space where the meter works and the time has ended. Drivers get a 5-minute grace period past the expired time on Alternate Side Parking signs and any other parking spaces with specific times listed (i.e.. 8:30am - 9:30am). During the 5-minute grace period, parking tickets cannot be issued.	$65	$35
35	Parking in a meter space for the purpose of displaying, selling, storing, or offering goods for sale.	$65	$35
36	Exceeding the posted speed limit in or near a designated school zone.	$50	$50
37-38	Muni Meter -- (37) Parking in excess of the allowed time (38) Failing to show a receipt or tag in the windshield. Drivers get a 5-minute grace period past the expired time on Muni-Meter receipts.	$65	$35
39	Parking for longer than the maximum time permitted by sign, street marking or traffic control device.	$65	$60
40	Stopping, standing or parking closer than 15 feet of a fire hydrant. Between sunrise and sunset, a passenger vehicle may stand alongside a fire hydrant as long as a driver remains behind the wheel and is ready to move the vehicle if required to do so.	$115	$115
42	Parking in a Muni Metered space in a commercial metered zone in which that Muni Meter is working and indicates the time has ended.	$65	$35
43	Parking in a commercial metered zone in which the meter is working and indicates that the time has ended. (Note: the difference is that 42 is Muni Meter and 43 is Meter)	$65	$35
44	Parking in a commercial metered zone for longer than the maximum time allowed.	$65	$35
45	Stopping, standing or parking in a traffic lane; or if a vehicle extends more than 8 feet from the nearest curb, blocking traffic.	$115	$115
46	Standing or parking on the roadway side of a vehicle stopped, standing or parked at the curb; in other words also known as "double parking". However, a person may stand a Commercial Vehicle alongside a vehicle parked at the curb at such locations and during such hours that stopping, standing and parking is allowed when quickly making pickups, deliveries or service calls. This is allowed if there is no parking space or marked loading zone on either side of the street within 100 feet. "Double parking" any type of vehicle is not allowed in Midtown Manhattan (the area from 14th Street to 60th Street, between First	$115	$115

	Avenue and Eighth Avenue inclusive). Midtown double parking is not allowed between 7:00am – 7:00pm daily except Sundays. (See Code 47.)		
47	Stopping, standing or parking a vehicle in Midtown Manhattan (the area from 14th Street to 60th Street, between First Avenue and Eighth Avenue) other than parallel or close to the curb.	$115	$115
48	Stopping, standing or parking within a marked bicycle lane.	$115	$115
49	Stopping, standing or parking alongside or opposite any street construction or obstruction and thereby blocking traffic.	$95	$95
50	Stopping, standing or parking in a crosswalk. Note: Crosswalks are not always identified by painted street markings.	$115	$115
51	Stopping, standing or parking on a sidewalk.	$115	$115
52	Stopping, standing or parking within an intersection.	$115	$115
53	Standing or parking in a safety zone, between a safety zone and the nearest curb, or within 30 feet of points on the curb immediately opposite the ends of a safety zone.	$115	$115
55	Stopping, standing or parking within a highway tunnel or on a raised or controlled access roadway.	$115	$115
56	Stopping, standing or parking alongside a barrier or divided highway unless permitted by sign.	$115	$115
57	Parking a vehicle within the area designated as The Blue Zone, Monday through Friday 7:00am -7:00pm. The Blue Zone is bounded by the northern property line of Frankfort Street, the northern property line of Dover Street, the eastern property line of South Street, the western property line of State Street, the center line of Broadway and the center line of Park Row.	$65	$65
58	Parking a vehicle on a marginal street or waterfront i.e. any street, road, place, area or way that connects or runs along waterfront property. Parking on a marginal street or waterfront is permitted if authorized by posted sign.	$65	$45
59	Standing or parking at an angle to the curb, except where allowed by rule or sign. Where angle parking is not authorized by a sign, a Commercial Vehicle may stand or park at an angle only for loading or unloading and if it leaves enough space for traffic flow.	$115	$115
60	Standing or parking at an angle to the curb, except where authorized by rule or sign.	$65	$45
61	Except where angle parking is allowed, stopping, standing or parking other than parallel to curb or edge of roadway. Or, parking opposite the direction of traffic.	$65	$45
62	Standing or parking a vehicle beyond markings on the curb or the pavement of a street which marks a parking space, except when a vehicle is too large to fit in that "marked" parking space. Where a vehicle is too large, it shall be parked with its front bumper at the front of the space and the rear bumper extending as little as possible into the next space.	$65	$45
63	Standing or parking a vehicle in any park between one-half hour after sunset and one-half hour before sunrise, except at places allowed for the parking of vehicles.	$95	$95
64	No standing except consul / diplomat plates with Dept. of State decals only.	$95	$95
65	Overtime standing consul / diplomat vehicles 30-minute limit D decals only.	$95	$95

66	Parking a trailer or semi-trailer which is not attached to a motor vehicle used for towing it, unless loading or unloading at an off-street platform.	$65	$45
67	Parking in front of a pedestrian ramp	$165	$165
68	Not parking as marked on a posted sign	$65	$65
69	Failing to show a muni-meter receipt, commercial meter zone.	$65	$65
70	Standing or parking a vehicle without showing a current registration sticker.	$65	$65
71	Standing or parking a vehicle without showing a current inspection sticker.	$65	$65
72	Standing or parking a vehicle with NY Plates and showing a damaged or fake inspection certificate.	$65	$65
73	Standing or parking a vehicle showing an expired, damaged, void, fake, or incorrect registration sticker.	$65	$65
74	Standing or parking a vehicle without properly showing its current plates on the outside of the vehicle attached tightly not more than 48, or less than 12, inches from the ground, clean, not covered by glass or plastic, with nothing preventing it from being read clearly.	$65	$65
75	Standing or parking a vehicle in which the License Plate number and/or the actual description of the vehicle does not match the information on the registration sticker.	$65	$65
77	Parking a bus, unless allowed by signs. A charter bus may park where parking is permitted at its point of origin or destination. A school bus may park in front of and within the building lines of a school.	$65	$45
78	Parking a Commercial Vehicle on a residential street between 9PM and 5AM unless doing business within 3 blocks. Parking is allowed during this time if the vehicle is owned or operated by a gas or oil supplier or maintenance company or by any public utility.	$65	$65
79	For a bus without passengers, waiting at a curb or other street location i.e., a layover; with passengers, waiting at a curb or other street location for more than five minutes, except in locations allowed by sign or by the Commissioner in writing.	$115	$115
80	Standing or parking a vehicle without head lamps, rear lamps, reflectors or other required equipment.	$60	$45
81	No standing except diplomat	$95	$95
82	Standing or parking a Commercial Vehicle unless all seats, except the front seats, and rear seat equipment removed. The name and address of the owner must be on the registration certificate plainly marked on both sides of the vehicle in letters and numerals not less than 3 inches in height. (Vehicles with Commercial Plates are considered to be Commercial Vehicles and must be altered accordingly.	$115	$115
83	Standing or parking a vehicle which is not properly registered.	$65	$65
84	Parking a Commercial Vehicle on any city street with its platform lift in the lowered position while no one is with the vehicle.	$65	$45
85	Parking a Commercial Vehicle more than 3 hours, where parking is allowed.	$65	$65
86	Standing or parking a vehicle to make pickups, deliveries or service calls for more than 3 hours, unless allowed by posted signs, between 7AM and 7PM,	$115	$115

	except Sundays, in Manhattan from 14th to 60th Streets and First to Eighth Avenues.		
89	Standing or parking a vehicle in the Garment District (in Manhattan, from 35th Street to 41st Street, between the Avenues of America and Eighth Avenue) between the hours of 7:00am – 7:00pm. However, a Commercial Vehicle which is a truck or a van can park temporarily (up to a maximum of 3 hours) while making a pickup, delivery or service call.	$115	$115
91	Parking in order to sell a vehicle by a person who regularly sells vehicles.	$65	$45
92	Parking in order to wash, grease, or repair a vehicle by a person who regularly repairs vehicles.	$65	$45
93	Stopping, standing or parking on paved roadway to change a flat tire, unless permitted by posted sign.	$65	$65
94	Vehicle Release penalty associated with NYPD's Violation Tow Program.	$100	(Regular Tow, plus violation fine) $200 (Heavy Tow, plus violation fine)
96	Standing or parking within 50 feet of the nearest rail of a railroad crossing.	$95	$95
97	Parking in a vacant lot. A vehicle may be parked on a vacant lot having a municipally authorized driveway upon written permission of the owner.	$65	$45
98	Standing or parking in front of a public or private driveway. The owner or renter of a lot accessed by a private driveway may park a passenger vehicle registered to him / her at that address in front of the driveway provided the lot does not contain more than 2 dwelling units and that parking does not violate any other rule or restriction.	$95	$95
99	All other parking, standing or stopping violations.	vary	vary

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Rules and Regulations

Parking Violations Rules and Regulations are contained in the provisions of Chapter 39 of Title 19 of the Official Compilation of Rules of the City of New York. Chapter 39 was adopted by the Commissioner of Finance to prescribe the internal procedures and organization of the Parking Violations Bureau, the amount and manner of payment of penalties, and other purposes of Article 2-B of the Vehicle and Traffic Law.

To view Chapter 39 Rules & Regulations visit the NYC Rules website and click on Chapter 39.

City traffic and parking rules and regulations, including Alternate Side of the Street parking, fall under the jurisdiction of the New York City Department of Transportation.

City Traffic and Parking Rules

NYC Department of Transportation

Alternate Side Regulations

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13 Samples of Tickets and Notification Letters

The following pages contain the following samples (in this order):

- Ticket issued by New York City parking ticket agents (front and back)
- Ticket issued by New York City Police Department (front and back)
- Relevant part of envelope attached to all tickets

  Note: Tickets issued by parking ticket agents are printed with a handheld electronic device that each agent carries, while tickets issued by police officers are instead typically filled out by hand (police officers do not carry the handheld devices). In either case, tickets are accompanied by an orange envelope (iconic in the city) that can be used for mailing payment to DOF.

- OLD letter 1, sent day 35-41
  "NOTICE OF OUTSTANDING VIOLATION" (4 pages)
- Letter 2 under all regimes, sent day 70-76
  "NOTICE OF IMPENDING DEFAULT JUDGMENT" (only front page shown)
- Letter 3 under all regimes, sent day 105-111
  "NOTICE OF JUDGMENT ENFORCEMENT" (only front page shown)
- NEW letter 1 under the NEW and EXP regimes, sent day 19-21
  "PRE-PENALTY NOTICE OF UNPAID VIOLATION" (only front page shown)
- NEW letter 1i under the EXP regime, sent day 19-21
  "PRE-PENALTY NOTICE OF UNPAID VIOLATION" (only front page shown)
- NEW letter 1s under the EXP regime, sent day 19-21
  "PRE-PENALTY NOTICE OF UNPAID VIOLATION" (only front page shown)
- NEW letter 1is under the EXP regime, sent day 19-21
  "PRE-PENALTY NOTICE OF UNPAID VIOLATION" (only front page shown)

  Note: All notification letters above include four pages, the last three of which describe the details of possible ways to pay and to contest (DOF is required by state law to have certain language in the notices). Those three pages are the same for all letters, except for one place on page 4 that lists the details of the specific violation (violation type, fine amount, etc.).

The City of New York
Notice of Parking Violation

THE NYC DEPARTMENT OF FINANCE MUST RECEIVE YOUR ANSWER TO THIS NOTICE WITHIN THIRTY (30) DAYS FROM THE DATE OF OFFENSE OR YOU WILL BE SUBJECT TO AN ADDITIONAL **$10** PENALTY YOU CAN RESPOND BY MAIL, THROUGH THE INTERNET OR IN PERSON. FAILURE TO ANSWER AS REQUESTED SHALL BE DEEMED AN ADMISSION OF LIABILITY, ADDITIONAL PENALTIES WILL BE CHARGED AND A DEFAULT JUDGMENT MAY BE ENTERED AGAINST YOU. VEHICLES OWNED BY PERSONS WITH OUTSTANDING DEFAULT JUDGMENTS MAY BE TOWED.

N/S=Not Shown
N/A=Not Applicable

Permit Displayed	Permit Number	Type
N/S	N/A	N/A

Name of the Operator, if present. If not present: OWNER OF THE VEHICLE BEARING LICENSE				
Plate	CD	Exp. Date	State	Plate Type
1205011	NS	N/S	IN	IRP
Make	Color	Year		Body Type
FORD	WHT	N/S		VAN
VIN #				

THE OPERATOR AND OWNER OF THE ABOVE VEHICLE ARE CHARGED AS FOLLOWS:

In Violation of Sect. 4-08 (Subsect. Below) of NYC Traffic Rules					
Double Parking-Midtown (1)(2) DAYS/HRS: EXCEPT Su/7A-7P					
Place of Occurrence					
Front Of 251 8th Ave					
VC	Meter #	Operational	Limit	County	Pct.
47				NY	010
Date/Time of Offense		Date/Time [illegible]			
08/31/12 10:39AM		N/A			

Complainant's Comments:

FINE AMOUNT: $115.00

Agency	Command	Tax Reg #
TRAFFIC	T-102	355299
Complainant's Name		
SHAMIM, MD. S.		
Signature of Complainant		

I affirm under penalty of perjury (Penal Law 210.45) that I personally observed the offense charged above; if the operator was present I indicated the operator's name or indicated "ID Refused" and personally served this Notice upon him/her, if the operator was not present or refused to accept personal service of this Notice, I affixed this Notice to the vehicle.

X Shamim

SEE REVERSE SIDE FOR IMPORTANT INFORMATION

7845858-E

TO CHALLENGE THIS TICKET

Choose one of the 3 hearing options below (choose only one type):

I. HEARING BY WEB

Go to nyc.gov/finance and choose Disputing A Ticket. You can now submit evidence over the web.

II. HEARING BY MAIL

I am requesting a hearing by mail (and not an in-person hearing) and pleading "Not Guilty" because (you must include a defense):

☐ 1. Ticket is defective.

☐ 2. Inspection/Registration is valid.
(Submit copy of Inspection/Registration Receipt.)

☐ 3. Meter was fast or broken.

☐ 4. Sign was incorrectly noted.

☐ 5. Vehicle was authorized to park at this location.

☐ 6. Vehicle was disabled.
(Submit proof of removal and/or repair.)

☐ 7. Vehicle was sold, stolen or transferred.
(Submit copy of Title, Bill of Sale or Police Report.)

☐ 8. Other Defense(s): _____

_____

_____

_____

NAME _____

ADDRESS _____

_____

CITY _____ STATE _____ ZIP _____

SIGNATURE _____ DATE _____

For a Hearing By Mail only, send the following:

1) The ticket;
2) With the form above completely filled out; and
3) Copies of any supporting evidence (not originals) such as witness statements, photographs, diagrams and additional statements to:

New York City Department of Finance
Hearing By Mail Unit
Post Office Box 29021
Brooklyn, New York 11202-9021

PLEASE DO NOT USE THE ORANGE ENVELOPE WHICH IS ONLY FOR PAYMENTS

III. HEARING IN PERSON

You do not need an appointment for a hearing. Bring this ticket and your evidence to any of the:

FINANCE HEARING LOCATIONS

Bronx	3030 Third Avenue	2nd Floor
Brooklyn	Temporarily Closed	1st Floor
Manhattan	66 John Street	2nd Floor
Queens	144-06 94th Avenue	1st Floor
Staten Island	350 St. Marks Place	1st Floor

For hearing and payment information, please visit nyc.gov/finance or call 311.

Outside NYC 212 NEW-YORK
TTY 212 504-4115

REV 10/11

The City of New York Notice of Parking Violation

Permit Displayed? ◯ Yes / No ◯ Type | Name or VIN

Date Registration Expires - N/S ◯

Name of Operator, if present.
If not present, then Owner of Vehicle Bearing License.
Operator Present but ID Refused? ◯
N/S = Not Shown

PLATE | CD

PLATE TYPE: ◯ PAS ◯ OMT ◯ COM ◯ | OTHER PLATE TYPE | N/S ◯

BODY TYPE: Sdn ◯ Van ◯ Subn ◯ Delv ◯ Trlr ◯ P/U ◯ Taxi ◯ Other

STATE: NY ◯ CT ◯ PA ◯ NJ ◯ MA ◯ FL ◯ VA ◯ Maine ◯ NC ◯ Other ◯ | Color | Model Yr

MAKE: Chev ◯ Ford ◯ Honda ◯ Dodge ◯ Jeep ◯ Linco ◯ Int'l ◯ Toyot ◯ Nissn ◯ Mitsu ◯ Me/Be ◯ GMC ◯ Mazda ◯ | OTHER

ALT PLATE | State | NY ◯ County: Kings ◯ Bronx ◯ Qns ◯ Rich ◯

THE OPERATOR & OWNER OF THE ABOVE VEHICLE ARE CHARGED AS FOLLOWS:

Time : | AM ◯ PM ◯ | Date of Offense

Time 1st Observed : | AM ◯ PM ◯ | Date 1st Observed / /

Precinct

Front of ◯ Place of Occurrence Opposite ◯

Operational? Yes ◯ No ◯

Code	Fine: All Other Areas	Fine: 96th St & South	CHARGED VIOLATION OF SECTION 4-08 (SUBSECTION BELOW) OF NYC TRAFFIC RULES
34	◯ $35	◯ $65	Expired Meter (h)(2)
37	$35 ◯	$65 ◯	Expired Muni-Meter (h)(10)
38	◯ $35	◯ $65	Fail to Disp. Muni-Meter Receipt (h)(10)
20	$60 ◯	$65 ◯	No Parking (d)
21	◯ $45	◯ $65	No Parking, SCR (d)(1)
27	$180 ◯		No Parking Except Handicap Plates/Permits (d)(3)
78	◯ $65		Nighttime Prkg Comm. Vehicle Residential St. (k)(6)
16	$95 ◯		No Standing Except Trucks loading/unloading (k)(2)
31	◯ $115		No Standing Commercial Metered Parking (l)(3)(ii)
17	$95 ◯		No Standing Except Auth. Vehicles (c)(4)
19	◯ $115		No Standing Bus Stop (c)(3)
14	$115 ◯		No Standing (c)
46	◯ $115		Double Parking (f)(1)
70	$65 ◯		Registration Sticker (j)(3) NYS Only
71	◯ $65		Inspection Sticker (j)(6) NYS Only
67	$165 ◯		Pedestrian Ramp (f)(7)
40	◯ $115		Fire Hydrant (e)(2) Feet From:
74	$65 ◯		Missing/Improperly Displayed Plate (j)(2)
	◯ $		Sub Section ( )

METER #

Days in effect (ALL unless otherwise specified)
M ◯ T ◯ W ◯ Th ◯ F ◯ Sa ◯ Su ◯

Hours in effect (All unless otherwise specified)
From: : AM ◯ PM ◯
To: : AM ◯ PM ◯

Other Description, Rider or Time Limit:

◯ Missing Sticker # | Expired ◯ / /

SEE REVERSE SIDE FOR IMPORTANT INFORMATION

I affirm under penalty of perjury (penal law 210.45) that I personally observed the offense charged above; if the operator was present; I wrote the operator's name above or marked the "ID refused" oval and personally served this Notice upon him/her, if no name appears above and the "ID refused" oval is not marked, I affixed this Notice to the vehicle. Rev. 5/10

Signature of Complainant | ISSUING AGENCY | CMD

Name of Complainant (printed) | Tax Reg. No.

13119481G-8

SERVICE COPY

TO CHALLENGE THIS TICKET

Choose one of the 3 hearing options below (choose only one type):

I. HEARING BY WEB

Go to nyc.gov/finance and choose Disputing A Ticket.

II. HEARING BY MAIL

I am requesting a hearing by mail (and not an in-person hearing) and pleading "Not Guilty" because (you must include a defense):

☐ 1. Ticket is defective.

☐ 2. Inspection/Registration is valid.
(Submit copy of inspection/Registration Receipt.)

☐ 3. Meter was fast or broken.

☐ 4. Sign was incorrectly noted.

☐ 5. Vehicle was authorized to park at location.

☐ 6. Vehicle was disabled.
(Submit proof of when vehicle was moved.)

☐ 7. Vehicle was sold, stolen or transferred.
(Submit copy of Title, Bill of Sale or Police Report.)

☐ 8. Other Defense(s): _____

_____

_____

_____

NAME _____

ADDRESS _____

_____

CITY _____ STATE _____ ZIP _____

SIGNATURE _____ DATE _____

For a Hearing By Mail only, send the following:

1) The ticket;
2) With the form above completely filled out; and
3) Copies of any supporting evidence (not originals) such as witness statements, photographs, diagrams and additional statements to:

New York City Department of Finance
Hearing By Mail Unit
Post Office Box 29021
Brooklyn, New York 11202-9021

PLEASE DO NOT USE THE ATTACHED ENVELOPE WHICH IS ONLY FOR PAYMENTS

III. HEARING IN PERSON

You do not need an appointment for a hearing. Bring this ticket and your evidence to any of the:

FINANCE HEARING LOCATIONS

Bronx	3030 Third Avenue	2nd Floor
Brooklyn	210 Joralemon Street	1st Floor
Manhattan	66 John Street	2nd Floor
Queens	144-06 94th Avenue	1st Floor
Staten Island	350 St. Marks Place	1st Floor

For hearing and payment information, please visit nyc.gov/finance or call 311.

Outside NYC 212 NEW-YORK
TTY 212 504-4115

TO NOT CHALLENGE THIS TICKET (PLEAD GUILTY) AND PAY

BY MAIL

1) Your check or money order must be in US dollars. 2) Please DO NOT send cash. 3) Make your payment out to: The NYC Department of Finance. 4) Put the ticket number(s), your plate number and the State of Registration on your payment.

OVER THE INTERNET OR BY PHONE

You can pay by Credit or Debit Card (if that Debit Card has a Master Card or Visa logo) by visiting our site: nyc.gov/finance or by calling: (212) 504-4041. You will have to pay a small convenience fee.

IN PERSON

Bring your payment of any type, along with this ticket, to any Finance Center. For Business Center days and hours, please visit nyc.gov/finance or call 311. You will have to pay a small convenience fee when paying by Credit or Debit Card.

FINANCE BUSINESS CENTERS

Bronx - 3030 Third Avenue - 2nd Floor
Brooklyn - Temporarily Closed
Manhattan - 66 John St. - 2nd Floor
Queens - 144-06 94th Avenue - 1st Floor
Staten Island - 350 St. Marks Place - 1st Floor

REMINDER

- You must pay within 30 days of the date of the ticket or you will be subject to a $10 penalty.
- If you do not respond additional penalties will be charged and a default judgment entered against you. If we enter a judgment, your vehicle may be towed.
- When paying by check, you are authorizing us to either use information from your check as a one-time electronic fund transfer from your account or process the payment as a check transaction. You cannot opt out of the electronic fund transfer. If we process your payment as an electronic fund transfer, you will not get your check back.

NYC Finance

New York City
Department of Finance
Parking Violations

Church Street Station, P.O. Box 3600, New York, N.Y. 10008

NOTICE OF OUTSTANDING VIOLATION

000242
#BWNCXPZ ********ALL FOR AADC 144
#1 NY PAS DXH5247//9# OS
HENRY S SCHNEIDER
309 HUDSON ST-APT # 1
ITHACA NY 14850-5707

JUNE 6, 2012

AMOUNT DUE: $75.00

DUE BY: 07/02/12

You have not responded to the violation(s) issued to a vehicle registered in your name. You must respond by the due date. You must **PAY IN FULL** (See Below) **OR DISPUTE THE VIOLATION(S).** (See pages 3 and 4).

Failure to respond in time **WILL CAUSE AN ADDITIONAL PENALTY OF $20.00 TO ACCRUE** and can lead to a default judgment entry in the Civil Court of the City of New York. **Finance may then take enforcement action such as garnisheeing your wages (where applicable by law) or towing your vehicle(s) located in New York City. If you have multiple violations, your NY State Motor Vehicle Registration may be suspended or you may be prevented from renewing it.**

Please note that payments or claims made within the last 14 days may not be reflected in this notice. To verify the current amount due, you can go to our website: nyc.gov/finance or call 311. (Outside of NYC, call 212-NEW-YORK (212-639-9675). For the Hearing Impaired TTY, call 212-504-4115).

NOTICE NO.	PLATE NO.	STATE	TYPE
L024395748	DXH5247	NY	PAS

VIOLATION	DOCKET NO.	VIO DATE	LOCATION	TIME	FINE	PEN	PAID	DUE	VIOLATION AND (C
7851986710	0000000000	04/27/12	346 W 20th St NY	09:08AM	65	10	00	75	NO PKG-STR CLN (

PAYMENT OPTIONS: You may pay: online, by phone, by mail or in person. To pay by mail, please follow the instructions below. For information on the other payment options, please see the reverse side of this page.

NOTICE: By making payment you are admitting liability to the charge and penalty shown.

PAYMENT COUPON

- Make your check or money order payable to the NYC Department of Finance. Do ***not*** mail cash.
- Payment ***must*** be made in U.S. Dollars.
- Write on the front of your check or money order:
  - Notice Number
  - Plate Number, State and Plate Type
- Insert this tear-off coupon in the enclosed envelope and make sure the City's address can be seen through the envelope window.

NYC DEPARTMENT OF FINANCE
PARKING VIOLATIONS
CHURCH STREET STATION
PO BOX 3600
NEW YORK NY 10008-3600

L 0 2 4 3 9 5 7 4 8 0 0 0 0 0 7 5 0 0 2 0 1 0

NOTICE NO.	PLATE	STATE	TYPE
L024395748	DXH5247	NY	PAS

VIOLATION	DOCKET NO.	AMOUNT DUE
7851986710	0000000000	75.00

PAYMENT INSTRUCTIONS

ONLINE: Access our website at: nyc.gov/finance and follow the instructions. Payment can be made by credit or debit card only. (There is a small service fee per violation).

BY PHONE: Call 212-504-4041. Payment can be made by credit or debit card only. (There is a small service fee per violation).

BY MAIL: Follow the instructions on the payment coupon on the first page. Payment can be made by check or money order.

IN PERSON: Payment can be made by check, money order, cash or credit or debit card at any of the Department of Finance Business Centers. (There is a small service fee for credit card payments). Bring this letter with your payment. Call 311 to find out the days and hours the Centers are open. The Business Centers are located at:

- Manhattan - 66 John Street - 2nd Floor - near the Fulton Street subway station in Lower Manhattan
- Brooklyn - **Closed for renovations**
- Bronx - 3030 Third Avenue - 2nd Floor - near the 156th Street and 149th Street subway station
- Queens - 144-06 94th Avenue, Jamaica - Street Level - near the Sutphin Blvd. subway station and LIRR
- Staten Island - 350 St. Marks Place - Street Level - near Hyatt Street in the St. George area

When you provide a check as payment, you authorize us either to use information from your check to make a one-time electronic fund transfer from your account or to process the payment as a check transaction.

LATE PAYMENT PENALTIES: The current amount due may include penalties. Failure to remit full payment by the due date listed on the reverse side of this page may result in additional penalties.

PARKING VIOLATION COPIES: Check here: ☐

You can obtain a copy of your violation(s) in the following ways:

- Visit our website at: nyc.gov/finance
- Call 311 (outside NYC call 212-NEW-YORK (212-639-9675) or 212-504-4115 for the Hearing Impaired TTY)
- Check the above box and return a copy of this letter to: NYC Department of Finance, Correspondence Unit, 66 John Street, 3rd Floor, NY, NY 10038. Please **do not** use the enclosed return envelope.

NOTE: This request does not relieve you of any current penalties you may have or any future penalties that you may receive. If you have "good cause" for requesting a waiver of these penalties, you should ask for an online, by mail or in person hearing by following the directions on page 4.

RED LIGHT AND BUS LANE NOTICE OF LIABILITY (NOL) COPIES:

You can obtain a copy of your Notice of Liability in the following ways:

- Call 311 (outside NYC call 212-NEW-YORK (212-639-9675) or 212-504-4115 for the Hearing Impaired TTY)
- Write to the NYC Department of Finance, Correspondence Unit, 66 John Street, 3rd Floor, NY, NY, 10038. Please **do not** use the enclosed return envelope.

NOTE: This request does not relieve you of any current penalties you may have or any future penalties that you may receive. If you have "good cause" for requesting a waiver of these penalties, you should ask for an online, by mail or in person hearing by following the directions on page 4.

For more information on the issuance of the red light and/or bus lane camera violations, visit our website at: nyc.gov/finance.

IMPROPER DUNNING: (Notice Pursuant to the VTL 241-a)
If this debt was paid or dismissed, or it was proven that the vehicle or plates were stolen, lost or surrendered before the violation was issued, you can stop further demands for payment. You can submit necessary documentation either in person at any Finance Business Center or by certified mail, return receipt requested to: The NYC Department of Finance, Parking Advocacy Unit, 66 John Street, New York, NY 10038. For further information about this procedure or assistance with any Parking, Red Light or Bus Lane Violations matter, call us at 311 or visit any Business Center. (Outside NYC, call 212-NEW-YORK (212-639-9675) or 212-504-4115 for the Hearing Impaired TTY).

ASSISTANCE FOR THE HEARING IMPAIRED
TTY 212-504-4115
Available 24 hours a day, 7 days a week.

QUESTIONS

Many inquiries can be resolved by calling 311. (Outside NYC, call 212-NEW-YORK (212-639-9675) or 212-504-4115 for the Hearing Impaired TTY, available 24 hours a day, 7 days a week). If your inquiry can NOT be resolved by calling, then please follow the instructions below.

TO DISPUTE THE VIOLATION

Check the appropriate box and RETURN THIS PAGE WITH COPIES OF ANY REQUIRED DOCUMENTS in the enclosed envelope to: NYC Department of Finance, Parking Violations, Hearing by Mail Unit, P.O. Box 29021 Cadman Plaza Station, Brooklyn, NY 11202-9021. **Please make sure that the City's name and address can be seen through the envelope window.** (If our return envelope is not large enough to hold all of your documents, then please use your own envelope).

If your claim does not fall into one of the categories listed, refer to HEARING PROCEDURES on REVERSE side of this page.

COMMON DEFENSES

☐ **PREVIOUSLY PAID OR MISAPPLIED PAYMENT DEFENSE:**

First check nyc.gov/finance or call 311 to determine the current amount due for the violations listed on this notice. Depending on the status, do one of the following:

1. If the full amount of the violation is still due, meaning the fine amount plus any existing penalty(ies), then check your records to see if your previous payment was for the same violation number(s) listed on this notice. (The violation number(s) are listed on the back of your cancelled check, money order, cashier receipt and on the confirmation receipt when paying online). If payment was for the same violation, was for the full fine amount and was received by Finance in the required time (within 30 days from the parking violation date or the date of the red light or bus lane notice), then send a photocopy of the front and back of your cancelled check or money order (NOT the money order receipt), or a copy of the cashier's receipt. Please do NOT send your original cancelled check. NOTE: If you paid by credit or debit card by phone or online, then please send us a copy of your confirmation receipt or your credit or debit card statement showing this transaction. If you paid by credit or debit card in person, then send us a copy of the cashier's receipt.

2. If only penalties are due, it means that your payment was received late. The penalty amount IS DUE AND MUST BE PAID. Payment must reach us by the due date listed on page 1. Continued failure to remit this amount in a timely manner may cause the entry of a default judgment.

☐ **NOT MY CAR DEFENSE:**

First call 311 to determine if we made a clerical error (your vehicle does not match the description of the vehicle on the violation). If an error was made, you must send A COPY OF YOUR VEHICLE REGISTRATION and a letter of explanation. If no error was made, then full payment is still due within the required time. See page 2 for payment instructions.

☐ **VEHICLE WAS STOLEN/OR PLATE(S) WAS STOLEN OR LOST/OR VEHICLE WAS SOLD DEFENSE: (This defense must be done by mail or in person. DO NOT CALL).**

Enclose a copy of either 1) the Police Stolen Vehicle Report or the Police Stolen/Lost Plate(s) Report obtainable at the police precinct where the theft/loss was reported, or 2) provide proof of sale including name and address of the new owner and (if applicable), proof of insurance cancellation or transfer for that vehicle or proof of plate surrender. (Voluntary Surrender of Plate(s) Report can be obtained from your local DMV). NOTE: If you are submitting either of the police reports or proof of sale to support your claim, then ONLY the violations listed on the notice issued on or after the date you made the official report or sold your vehicle may be dismissed. If a violation was issued PRIOR to the report date and you are disclaiming responsibility, then we require a fully detailed statement plus the subsequent police report(s), as well as proof of insurance cancellation when applicable.

FOR PARKING VIOLATIONS ONLY:

☐ **BROKEN METER DEFENSE:** (For Violation Code 34 Only-Expired Meter).

OR

☐ **FAST METER DEFENSE:** (For Violation Code 34 Only-Expired Meter).

First call 311 to determine if we received your previously submitted claim. If we did not receive it, then check the applicable box and return this page.

HENRY S SCHNEIDER
309 HUDSON ST-APT # 1
ITHACA NY 14850-5707

HEARING PROCEDURES

You don't have to appear in person to obtain a hearing and we suggest you use the internet or submit the information by mail.

ONLINE HEARING
Go to nyc.gov/finance. You may submit any supporting evidence such as photographs, diagrams and documents online.

BY MAIL HEARING
Fill in the Defense Statement below and RETURN THIS PAGE WITH COPIES OF ANY REQUIRED DOCUMENTS in the enclosed return envelope to the Cadman Plaza address listed below. **Please make sure that the City's name and address can be seen through the envelope window.** (If our return envelope is not large enough to hold all of your documents, then please use your own envelope and mail to the address listed at the bottom of this page).

SEE THE REVERSE SIDE OF THIS PAGE for more information on how "To Dispute the Violation".

DEFENSE STATEMENT:
Please print clearly. If more than one violation appears on this notice, please specify which you are disputing. (If additional space is needed, please attach a page to this form).

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

HEARING IN PERSON:
Bring this notice, the violation if available, and any evidence to any Business Center listed on page 2. Hearings are available on a first come, first served basis.

SPECIAL INSTRUCTIONS FOR COMMERCIAL FIRMS ONLY:
Multiple violation hearings must be conducted at the Commercial Adjudications Unit. Call (212) 361-5900. NOTE: If your company wants to join the NYC Fleet Program, call (212) 487-2180.

(Fold Here)

HEARING REQUEST OR DEFENSE CLAIM

NOTICE NO.	PLATE NO.	STATE	TYPE
LO24395748	DXH5247	NY	PAS

VIOLATION	DOCKET NO.	VIO DATE	LOCATION	TIME	FINE	PEN	PAID	DUE	VIOLATION AND (C
7851986710	0000000000	04/27/12	346 W 20th St NY	09:08AM	65	10	00	75	NO PKG-STR CLN (

NYC DEPARTMENT OF FINANCE
PARKING VIOLATIONS
HEARING BY MAIL UNIT
PO BOX 29021 CADMAN PLAZA STATION
BROOKLYN NY 11202-9021

NYC Finance

New York City
Department of Finance
Parking Violations

Church Street Station, P.O. Box 3600, New York, N.Y. 10008

NOTICE OF IMPENDING DEFAULT JUDGMENT

000338
#BWNCXPZ **********MIXED AADC 220
#1 NY PAS DXH5247//9# ID
HENRY S SCHNEIDER
309 HUDSON ST-APT # 1
ITHACA NY 14850-5707

JULY 11, 2012

AMOUNT DUE: $95.00

DUE BY: 08/10/12

You have failed to respond to the previous notice for the parking/red light/bus lane violations issued to a vehicle registered in your name. If you do not respond, we will file a civil default judgment against you in the Civil Court of the City of New York which then authorizes us to:

- **Make your debt a matter of PUBLIC RECORD to be used by credit and title companies at THEIR discretion.**
- **Tow any vehicles registered in your name resulting in extra fees and expenses.**
- **Garnish your non-exempt wages and/or seize other non-exempt assets located in NYC, including real estate and bank accounts.**
- **Suspend or prevent renewal of your NY State motor vehicle registration.**

TO AVOID ADDITIONAL PENALTIES AND JUDGMENT ENTRY YOU MUST RESPOND BY THE DUE DATE. YOU MUST: PAY IN FULL (See Below) or DISPUTE THE VIOLATION(S) (See pages 3 and 4).

Please note that payments or claims made within the last 14 days may not be reflected in this notice. To verify the current amount due, you can go to our website: nyc.gov/finance or call 311. (Outside of NYC, call 212-NEW-YORK (212-639-9675). For the Hearing Impaired TTY, call 212-504-4115).

NOTICE NO.	PLATE NO.	STATE	TYPE
L030191520	DXH5247	NY	PAS

VIOLATION	DOCKET NO.	VIO DATE	LOCATION	TIME	FINE	PEN	PAID	DUE	VIOLATION AND (C
7851986710	0000000000	04/27/12	346 W 20th St NY	09:08AM	65	30	00	95	NO PKG-STR CLN (

PAYMENT OPTIONS: You may pay: online, by phone, by mail or in person. To pay by mail, please follow the instructions below. For information on the other payment options, please see the **reverse** side of this page.

NOTICE: By making payment you are admitting liability to the charge and penalty shown.

PAYMENT COUPON

- Make your check or money order payable to the NYC Department of Finance. Do ***not*** mail cash.
- Payment ***must*** be made in U.S. Dollars.
- Write on the front of your check or money order:
  - Notice Number
  - Plate Number, State and Plate Type
- Insert this tear-off coupon in the enclosed envelope and make sure the City's address can be seen through the envelope window.

NYC DEPARTMENT OF FINANCE
PARKING VIOLATIONS
CHURCH STREET STATION
PO BOX 3600
NEW YORK NY 10008-3600

L 0 3 0 1 9 1 5 2 0 0 0 0 0 0 9 5 0 0 2 0 2 0

NOTICE NO.	PLATE	STATE	TYPE
L030191520	DXH5247	NY	PAS

VIOLATION	DOCKET NO.	AMOUNT DUE
7851986710	0000000000	95.00

ID RC 2020

NOTICE OF JUDGMENT ENFORCEMENT

NYC Finance

NEW YORK CITY
DEPARTMENT OF FINANCE
PARKING VIOLATIONS/COLLECTIONS DIVISION

CHURCH STREET STATION, P.O. BOX 3600, NEW YORK, N.Y. 10008

000015
#[redacted] **********5-DIGIT 11234
#1 NY OMS [redacted] //0# FNNY
[redacted]
[redacted]
BROOKLYN NY 11234-[redacted]

SEPTEMBER 11, 2013

AMOUNT DUE: $388.38

DUE: IMMEDIATELY

The New York City Department of Finance **has entered a judgment against you** for the parking/camera violation(s) listed on the reverse side of this page. This list may also include previously entered judgments. New judgments are indicated by an asterisk (*).

Notices previously sent to you by the Department of Finance stated what you must do to prevent judgments from being entered against you.

YOU ARE NOW SUBJECT TO IMMEDIATE JUDGMENT ENFORCEMENT PROCEDURES. We intend to take legal steps to collect all outstanding judgment debt. As appropriate and in accordance with law, judgment enforcement procedures may include, but are not limited to:

- **Assigning your judgment debt to a Collection Agency**
- **Seizing any motor vehicle registered to you and selling it at auction**
- **Seizing your non-exempt personal property**
- **Restraining your bank accounts**
- **Garnisheeing your non-exempt wages**
- **Preventing renewal of your vehicle registration**

This is a serious matter and, if one of the above judgment enforcement procedures has not yet been taken against you, such action may occur at any time. It is in your interest to pay the above amount **immediately** because many of the above procedures would also require you to pay additional fees and costs beyond the amount shown above, such as Sheriff or Marshal fees and costs.

If you believe there is a mistake in the amount due, or need any additional information, please call our Help Line immediately at 212-440-5410. NOTE: Even if you previously made a payment, you may owe the above amount for late penalties or your payment may have satisfied different violations. However, any payment received or dismissal of a charged violation occurring within seven days of the above date may not be shown in this letter. **Instructions for paying by mail are listed below. Instructions for paying online or in person are listed on the enclosed sheet, along with additional information.**

PAYMENT COUPON

- Make your check or money order payable to the NYC Department of Finance. Do *not* mail cash.
- Payment *must* be made in U.S. Dollars.
- Write on the front of your check or money order:
  - Notice Number
  - Plate Number, State and Plate Type
- Insert this tear-off coupon in the enclosed envelope and make sure the City's address can be seen through the envelope window.

[redacted]

NOTICE NO.	PLATE	STATE	TYPE
[redacted]	[redacted]	NY	OMS

TOTAL JUDGMENT AMOUNT DUE:
$388.38

NYC DEPARTMENT OF FINANCE
PARKING VIOLATIONS
CHURCH STREET STATION
PO BOX 3600
NEW YORK NY 10008-3600

FNNY RC 2050

NYC Finance

New York City
Department of Finance
Parking Violations

Church Street Station, P.O. Box 3600, New York, N.Y. 10008

PRE-PENALTY NOTICE OF UNPAID VIOLATION

[redacted]

JUNE 1, 2012

AMOUNT DUE: $115.00

DUE BY: 06/13/12

We have not received payment for the violation(s) issued to a vehicle registered in your name. We are writing to let you know that we must receive your payment by the due date above or you will owe an additional $10.00 as a penalty for late payment. Please pay the amount due by the date indicated above so that you do not owe penalty charges. We appreciate your cooperation.

If you would like to dispute the violation(s), please see pages 3 and 4 for instructions.

Please note that payments or claims made within the last 14 days may not be reflected in this notice. To verify the current amount due, you can go to our website: nyc.gov/finance or call 311. (Outside of NYC, call 212-NEW-YORK (212-639-9675). For the Hearing Impaired TTY, call 212-504-4115).

NOTICE NO.	PLATE NO.	STATE	TYPE
[redacted]	[redacted]	NJ	PAS

VIOLATION	VIO DATE	LOCATION	TIME	FINE	PEN	RED	PAID	DUE	VIOLATION AND (CODE)
[redacted]	04/12/12	323 W 43rd St NY	10:13PM	115	00	00	00	115	NO STD-LIMITS (14)

PAYMENT OPTIONS: Pay online, by phone, by mail or in person. To pay by mail, please follow the instructions below. For information on the other payment options, please turn to the other side of this page.

NOTICE: By making payment you are admitting liability to the charge shown.

PAYMENT COUPON

- Make your check or money order payable to the NYC Department of Finance. Do ***not*** mail cash.
- Payment ***must*** be made in U.S. Dollars.
- Write on the front of your check or money order:
  - Notice Number
  - Plate Number, State and Plate Type
- Insert this tear-off coupon in the enclosed envelope and make sure the City's address can be seen through the envelope window.

NYC DEPARTMENT OF FINANCE
PARKING VIOLATIONS
CHURCH STREET STATION
PO BOX 3600
NEW YORK NY 10008-3600

[redacted]

NOTICE NO.	PLATE	STATE	TYPE
[redacted]	[redacted]	NJ	PAS

VIOLATION	AMOUNT DUE
[redacted]	115.00

NYC Finance

New York City
Department of Finance
Parking Violations

Church Street Station, P.O. Box 3600, New York, N.Y. 10008

PRE-PENALTY NOTICE OF UNPAID VIOLATION

AUGUST 1, 2013

AMOUNT DUE: $65.00

DUE BY: 08/15/13

You have not paid the parking, bus lane, or red light ticket(s) issued to your vehicle. If you do not pay by the due date, we will add penalties to the amount you owe, and your vehicle may be booted or towed.

AMOUNT DUE IF PAID BY 08/15/13:	**$65.00**
AMOUNT DUE IF PAID BY 09/19/13:	**$75.00 (INCLUDES $10 PENALTY FOR LATE PAYMENT)**
AMOUNT DUE IF PAID BY 10/24/13:	**$95.00 (INCLUDES $30 PENALTY FOR LATE PAYMENT)**
AMOUNT DUE IF PAID AFTER 10/24/13:	**$125.00 (INCLUDES $60 PENALTY FOR LATE PAYMENT)**

If no payment is received by 10/31/13, Finance may boot or tow your vehicle.

If you would like to dispute the violation(s), please see pages 3 and 4 for instructions.

Please note that payments or claims made within the last 14 days may not be reflected in this notice. To verify the current amount due, you can go to our website: nyc.gov/finance, or call 311. (Outside of NYC, call 212-NEW-YORK (212-639-9675). For the hearing Impaired TTY, call 212-504-4115).

NOTICE NO.	PLATE NO.	STATE	TYPE
		NY	PAS

VIOLATION	VIO DATE	LOCATION	TIME	FINE	PEN	RED	PAID	DUE	VIOLATION AND (CODE)
	07/14/13	N Shore Front Pky Q	07:18AM	65	00	00	00	65	PLATE MISSING (74)

PAYMENT OPTIONS: You may pay online, by phone, by mail or in person. To pay by mail, please follow the instructions below. For information on the other payment options, please see the reverse side of this page.

NOTICE: By making payment, you are admitting liability to the charge and penalty shown.

PAYMENT COUPON

- Make your check or money order payable to the NYC Department of Finance. Do *not* mail cash.
- Payment ***must*** be made in U.S. Dollars.
- Write on the front of your check or money order:
  - Notice Number
  - Plate Number, State and Plate Type
- Insert this tear-off coupon in the enclosed envelope and make sure the City's address can be seen through the envelope window.

NOTICE NO.	PLATE	STATE	TYPE
		NY	PAS

VIOLATION	AMOUNT DUE
	65.00

NYC DEPARTMENT OF FINANCE
PARKING VIOLATIONS - CHURCH STREET STATION
PO BOX 3600
NEW YORK NY 10008-3600

PPN RC 2017

New York City
Department of Finance
Parking Violations
Church Street Station, P.O. Box 3600, New York, N.Y. 10008

PRE-PENALTY NOTICE OF UNPAID VIOLATION

AUGUST 1, 2013

AMOUNT DUE: $65.00

DUE BY: 08/15/13

PRESORT 1 1 AT 0.384 P1C1 <3>

FLORAL PARK NY 11001-

WARNING: PENALTY APPROACHING
DON'T MISS THE DEADLINE

You have not paid the parking, bus lane, or red light ticket(s) issued to your vehicle. If you do not pay by the due date, we will add penalties to the amount you owe, and your vehicle may be booted or towed.

If you would like to dispute the violation(s), please see pages 3 and 4 for instructions.

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NOTICE NO.	PLATE NO.	STATE	TYPE
		NY	PAS

VIOLATION	VIO DATE	LOCATION	TIME	FINE	PEN	RED	PAID	DUE	VIOLATION AND (CODE)
	07/14/13	84-27 262 ST Q	01:19AM	65	00	00	00	65	NGHTPKG RES STR (78)

PAYMENT OPTIONS: You may pay online, by phone, by mail or in person. To pay by mail, please follow the instructions below. For information on the other payment options, please see the reverse side of this page.

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NOTICE NO.	PLATE	STATE	TYPE
		NY	PAS

VIOLATION	AMOUNT DUE
	65.00

NYC DEPARTMENT OF FINANCE
PARKING VIOLATIONS - CHURCH STREET STATION
PO BOX 3600
NEW YORK NY 10008-3600

PPN RC 2017

New York City
Department of Finance
Parking Violations

Church Street Station, P.O. Box 3600, New York, N.Y. 10008

PRE-PENALTY NOTICE OF UNPAID VIOLATION

AUGUST 1, 2013

AMOUNT DUE: $60.00

DUE BY: 08/15/13

[redacted]

WARNING: PENALTY APPROACHING
DON'T MISS THE DEADLINE

You have not paid the parking, bus lane, or red light ticket(s) issued to your vehicle. If you do not pay by the due date, we will add penalties to the amount you owe, and your vehicle may be booted or towed.

AMOUNT DUE IF PAID BY 08/15/13:	**$60.00**
AMOUNT DUE IF PAID BY 09/19/13:	**$70.00 (INCLUDES $10 PENALTY FOR LATE PAYMENT)**
AMOUNT DUE IF PAID BY 10/24/13:	**$90.00 (INCLUDES $30 PENALTY FOR LATE PAYMENT)**
AMOUNT DUE IF PAID AFTER 10/24/13:	**$120.00 (INCLUDES $60 PENALTY FOR LATE PAYMENT)**

If no payment is received by 10/31/13, Finance may boot or tow your vehicle.

If you would like to dispute the violation(s), please see pages 3 and 4 for instructions. Please note that payments or claims made within the last 14 days may not be reflected in this notice. To verify the current amount due, you can go to our website: nyc.gov/finance, or call 311. (Outside of NYC, call 212-NEW-YORK (212-639-9675). For the hearing Impaired TTY, call 212-504-4115).

NOTICE NO.	PLATE NO.	STATE	TYPE
[redacted]	[redacted]	NY	PAS

VIOLATION	VIO DATE	LOCATION	TIME	FINE	PEN	RED	PAID	DUE	VIOLATION AND (CODE)
[redacted]	07/14/13	84-02 Roosevelt Ave	03:26PM	60	00	00	00	60	NO PRKG-LIMITS (20)

PAYMENT OPTIONS: You may pay online, by phone, by mail or in person. To pay by mail, please follow the instructions below. For information on the other payment options, please see the reverse side of this page.

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PAYMENT COUPON

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- Payment ***must*** be made in U.S. Dollars.
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  - Notice Number
  - Plate Number, State and Plate Type
- Insert this tear-off coupon in the enclosed envelope and make sure the City's address can be seen through the envelope window.

[redacted]

NOTICE NO.	PLATE	STATE	TYPE
[redacted]	[redacted]	NY	PAS

VIOLATION	AMOUNT DUE
[redacted]	60.00

NYC DEPARTMENT OF FINANCE
PARKING VIOLATIONS - CHURCH STREET STATION
PO BOX 3600
NEW YORK NY 10008-3600

PPN RC 2017