Supplemental Appendix for Referees

This appendix for referees and interested readers will be posted online if our paper is published in *JOP*.

We denote the investigator's strategy in the first period as $\tau^1(\alpha_I, s) : [0,1] \times \{G, NG\} \rightarrow \{T, D\}$. Similarly for the second period investigator $\tau^2(\alpha, s) : [0,1] \times \{G, NG\} \rightarrow \{T, D\}$. Let $\mu_p(A)$ denote the executive's belief about the probability that the incumbent investigator is passive ($\alpha_I < \underline{\alpha}$), when she takes the first period case to trial and it is acquitted. Likewise let $\mu_n(A)$ denote the probability that $\alpha_I \in (\underline{\alpha}, \overline{\alpha})$ and let $\mu_a(A)$ denote the probability that $\alpha_I > \overline{\alpha}$ after an acquittal. Similarly for a conviction or drop, denote beliefs as $\mu_p(C), \mu_n(C), \mu_a(C), \mu_p(D), \mu_n(D)$, and $\mu_a(D)$. Define the probability that a random replacement is passive, neutral, or aggressive as $\phi_p = F(\underline{\alpha})$, $\phi_n = F(\bar{\alpha}) - F(\underline{\alpha})$, and $\phi_a = 1 - F(\bar{\alpha})$. Finally, given signal s we denote the difference between the probability that the investigator is retained after trying and the probability that the investigator is retained after dropping as

$$r(s) \equiv \sigma_C \left[\gamma^s (1-\rho_G) + (1-\gamma^s)\rho_{NG}\right] + \sigma_A \left[(1-\gamma^s)(1-\rho_{NG}) + \gamma^s \rho_G\right] - \sigma_D. \quad (4)$$

Note that if $r(s) > 0$ the investigator has an accountability incentive to try whereas for $r(s) < 0$ she has an incentive to drop.

Proof of Lemma 2 An investigator sees either $s = G$ or $s = NG$. In terms of the utility received from the case in a given period, which we calculate the same way as in Lemma 1, one of these information sets is more important to the investigator in the following sense.

A passive investigator cares more about dropping a case when $s = NG$ than she does when $s = G$, i.e., using the reasoning from Lemma 1, for any $\alpha_I < \underline{\alpha}$, $U(Drop|s = NG) - U(Try|s = NG) > U(Drop|s = G) - U(Try|s = G)$ because

$$\begin{aligned} -\gamma^{NG}\alpha_I(1-\rho_G) + \left(1-\gamma^{NG}\right)(1-\alpha_I)\rho_{NG} &> -\gamma^{G}\alpha_I(1-\rho_G) + \left(1-\gamma^{G}\right)(1-\alpha_I)\rho_{NG} \\ \left(\gamma^{G}-\gamma^{NG}\right)\left[\alpha_I(1-\rho_G) + (1-\alpha_I)\rho_{NG}\right] &> 0. \end{aligned}$$

The last expression holds because $\gamma^G > \gamma^{NG}$.

Similarly, an aggressive investigator cares more about trying rather than dropping when $s = G$ than when $s = NG$, i.e., for $\alpha_I > \overline{\alpha}$, $U(Try|s = G) - U(Drop|s = G) > U(Try|s = NG) - U(Drop|s = NG)$.

For a neutral investigator we solve for $\tilde{\alpha}$ such that the investigator is indifferent in terms of which decision is more important, i.e., $U(Try|s = G) - U(Drop|s = G) = U(Drop|s = NG) - U(Try|s = NG)$:

$$\begin{aligned}
\gamma^G \alpha_I (1-\rho_G) - \left(1-\gamma^G\right)(1-\alpha_I)\rho_{NG} &= -\gamma^{NG}\alpha_I(1-\rho_G) + \left(1-\gamma^{NG}\right)(1-\alpha_I)\rho_{NG} \\
\alpha_I\left[\left(\gamma^G+\gamma^{NG}\right)(1-\rho_G) + \left(2-\gamma^{NG}-\gamma^G\right)\rho_{NG}\right] &= \left(2-\gamma^{NG}-\gamma^G\right)\rho_{NG} \\
\tilde{\alpha} &\equiv \frac{\left(2-\gamma^{NG}-\gamma^G\right)\rho_{NG}}{(\gamma^G+\gamma^{NG})(1-\rho_G) + (2-\gamma^{NG}-\gamma^G)\rho_{NG}}.
\end{aligned}$$

It is straightforward to confirm that $\underline{\alpha} < \tilde{\alpha} < \overline{\alpha}$. We still need to establish that for $\alpha_I \leq \tilde{\alpha}$ it is optimal to drop in the first period when $s = NG$ and for $\alpha_I > \tilde{\alpha}$ it is optimal to try in the first period when $s = G$, regardless of accountability incentives. To do this, we find bounds on how much the investigator's first period actions can affect her utility from second period actions. For $\alpha_I \leq \tilde{\alpha}$, the largest possible difference between a investigator's expected utility from her own choice of whether to try when retained versus a replacement investigator's choice occurs when $s = NG$ in the second period. She can potentially lose up to $U(Drop|s = NG) - U(Try|s = NG)$ if the replacement is aggressive. However, the probability of this occurring is strictly less than 1, because there is some chance that the second period signal is $s = G$ and there is also some probability that the replacement is not aggressive. Thus a strict upper bound on the investigator's expected second period utility loss from choosing $x = T$ when $s = NG$ in the first period is $U(Drop|s = NG) - U(Try|s = NG)$. Because the investigator's first period utility difference between trying and dropping is $U(Drop|s = NG) - U(Try|s = NG)$ it is thus strictly optimal for her to drop the case in the first period. For $\alpha_I \geq \tilde{\alpha}$, a symmetric argument shows that it is strictly optimal to chose $x = T$ when $s = G$ in the first period.■

Proof of Lemma 3 We characterize $\underline{\alpha}^1$, the cutpoint for first period investigator behavior when $s = G$. The argument for $\overline{\alpha}^1$ is essentially similar, except using $s = NG$. First note that, from Lemma 2, any investigator with $\alpha_I \geq \tilde{\alpha}$ strictly prefers to try when $s = G$. There are three cases, based on the difference in probability of retention from trying versus dropping after a guilty signal: $r(G) = 0$, $r(G) > 0$, and $r(G) < 0$.

Case 1: $r(G) = 0$. First period actions don't affect the investigator's retention probability when $s = G$, so $\underline{\alpha}^1 = \underline{\alpha}$, i.e., she chooses her most preferred action.

Case 2: $r(G) > 0$. Any investigator with $\alpha_I \geq \underline{\alpha}$ strictly prefers to try. That's what she wants to do anyway in the first period and doing so increases the chance that she will be retained, which strictly increases her utility in the second period.

To characterize the behavior of investigators with $\alpha_I < \underline{\alpha}$, we find an investigator's utility difference from trying versus dropping, which we will denote as $U_{TD}(\alpha_I; s, r(s))$.

The first component of $U_{TD}(\alpha_I; G, r(G))$ is just the first period utility difference from the two actions, which, as in the proof of Lemma 1 is $\alpha_I \gamma^G (1 - \rho_G) - (1 - \alpha_I) \left(1 - \gamma^G\right) \rho_{NG}$.

The second component is the second period effect of her first period action. The difference between her probability of being retained if she tries and her probability of being retained if she drops is $r(G)$. If a passive investigator is replaced, there is an increased chance of an incorrect conviction in the second period, which results in $-(1 - \alpha_I)$ utility for the investigator. Specifically, it may be the case that the replacement investigator is a neutral type who mistakenly observes $s = G$ when the defendant is innocent and thus brings the case to trial (which the passive investigator wouldn't do) and the trial produces a mistaken outcome. The probability of this happening is $\phi_n (1 - q)(1 - \pi) \rho_{NG}$. Or it may be the case that the replacement is aggressive, the defendant is innocent, and the trial produces a mistaken outcome. The probability of this happening is $\phi_a (1 - \pi) \rho_{NG}$.

If the passive investigator is replaced, there is also a decreased chance of a correct second period conviction, which counts for $-\alpha_I$ utility. Specifically, the replacement investigator may be a neutral type who correctly observes $s = G$ when the defendant is guilty, brings the case to trial, and receives a correct trial outcome. The probability of this happening is $\phi_n q\pi(1-\rho_G)$. Or it may be the case that the replacement is aggressive, the defendant is guilty, and the trial produces a correct outcome. The probability of this happening is $\phi_a \pi(1-\rho_G)$.

Combining all of these terms, for a passive investigator, i.e., $\alpha_I \leq \underline{\alpha}$:

$$\begin{aligned} U_{TD}(\alpha_I; G, r(G)) &= \alpha_I \gamma^G (1-\rho_G) - (1-\alpha_I)\left(1-\gamma^G\right)\rho_{NG} \\ &\quad + r(G)(1-\alpha_I)(1-\pi)\rho_{NG}\left[\phi_n(1-q)+\phi_a\right] \\ &\quad - r(G)\alpha_I \pi(1-\rho_G)\left[\phi_n q + \phi_a\right] \\ &= \rho_{NG}\left\{r(G)(1-\pi)\left[\phi_n(1-q)+\phi_a\right] - (1-\gamma^s)\right\} \\ &\quad + \alpha_I(1-\rho_G)\left(\gamma^G - r(G)\pi\left[\phi_n q+\phi_a\right]\right) \\ &\quad + \alpha_I \rho_{NG}\left(\left(1-\gamma^G\right) - r(G)(1-\pi)\left[\phi_n(1-q)+\phi_a\right]\right). \end{aligned}$$

Focusing on the last two lines of this expression, we see that for $\alpha_I \in [0, \underline{\alpha}]$, $U_{TD}(\alpha_I; s, r(s))$ is a linear function of α_I. Obviously, for $r(G) > 0$, $U_{TD}(\underline{\alpha}; G, r(G)) > 0$, i.e., an investigator who is indifferent between trying and dropping in terms of first period outcomes when $s = G$ strictly prefers to try when doing so increases the probability that she is retained. Because $U_{TD}(\alpha_I; G, r(G))$ is linear in α_I this means there are two possible situations. First, it may be the case that $U_{TD}(0; G, r(G)) > 0$, in which case all investigators with $\alpha_I \in [0, \underline{\alpha}]$ strictly prefer to try when $s = G$; in this case $\underline{\alpha}^1 = 0$. Second, it may be the case that for some $\underline{\alpha}^1 \in (0, \underline{\alpha})$, $U_{TD}(\underline{\alpha}^1; G, r(G)) = 0$, in which case $U_{TD}(\alpha_I; G, r(G))$ must be strictly increasing in α_I (because $U_{TD}(\underline{\alpha}; G, r(G)) > 0$) and hence all investigators with $\alpha_I < \underline{\alpha}^1$ strictly prefer to drop when $s = G$ and those with $\alpha_I > \underline{\alpha}^1$ strictly prefer to try. Setting $U_{TD}(\alpha_I; G, r(G)) = 0$ and solving out yields

$$\underline{\alpha}^1 = \frac{\rho_{NG}\left[\left(1-\gamma^G\right) - r(G)(1-\pi)\left[\phi_n(1-q)+\phi_a\right]\right]}{\rho_{NG}\left[(1-\gamma^G) - r(G)(1-\pi)\left[\phi_n(1-q)+\phi_a\right]\right] + (1-\rho_G)\left(\gamma^G - r(G)\pi\left[\phi_n q+\phi_a\right]\right)}. \tag{5}$$

Note that for $r(G) > 0$, $\underline{\alpha}^1$ is a continuous function of $r(G)$.

Case 3: $r(G) < 0$. In this case, a passive investigator obviously will not try a case. For a neutral investigator, the utility difference between trying versus dropping is

$$\begin{aligned} U_{TD}(\alpha_I; G, r(G)) &= \alpha_I \gamma^G (1-\rho_G) - (1-\alpha_I)\left(1-\gamma^G\right)\rho_{NG} \\ &\quad + r(G)(1-\alpha_I)(1-\pi)\rho_{NG}\left[\phi_a q - \phi_p (1-q)\right] \\ &\quad + r(G)\alpha_I \pi (1-\rho_G)\left[\phi_p q - \phi_a (1-q)\right] \\ &= \rho_{NG}\left\{r(G)(1-\pi)\left[\phi_a q - \phi_p(1-q)\right] - \left(1-\gamma^G\right)\right\} \\ &\quad + \alpha_I (1-\rho_G)\left\{\gamma^G + r(G)\pi\left[\phi_p q - \phi_a(1-q)\right]\right\} \\ &\quad + \alpha_I \rho_{NG}\left\{\left(1-\gamma^G\right) - r(G)(1-\pi)\left[\phi_a q - \phi_p(1-q)\right]\right\}. \end{aligned}$$

Note that this expression is linear in α_I. Moreover, it is strictly increasing because an investigator at $\underline{\alpha}$ strictly prefers to drop and, from Lemma 2, an investigator at $\tilde{\alpha}$ strictly prefers to try when $s = G$. Thus for $r(G) < 0$, there is a unique solution $\underline{\alpha}^1 \in (\underline{\alpha}, \tilde{\alpha})$, which is a continuous function of $r(G)$:

$$\underline{\alpha}^1 = \frac{\rho_{NG}\left\{\left(1-\gamma^G\right) - r(G)(1-\pi)\left[\phi_a q - \phi_p(1-q)\right]\right\}}{\rho_{NG}\left\{(1-\gamma^G) - r(G)(1-\pi)\left[\phi_a q - \phi_p(1-q)\right]\right\} + (1-\rho_G)\left\{\gamma^G + r(G)\pi\left[\phi_p q - \phi_a(1-q)\right]\right\}}. \tag{6}$$

For part *(iv)* of Lemma 3, note that as $r(G) \to 0$, the right hand sides of Equations 5 and 6 both converge to $\frac{\rho_{NG}\left(1-\gamma^G\right)}{\rho_{NG}(1-\gamma^G)+(1-\rho_G)\gamma^G}$, i.e., $\underline{\alpha}$, so $\underline{\alpha}^1$ is a continuous function of $r(G)$. From Equation 4 it is obvious that $r(G)$ is a continuous function of the executive's strategy σ, so $\underline{\alpha}^1$ is also a continuous function of σ.

For part *(v)* of Lemma 3, we assume that $\underline{\alpha}^1 = 0$ and $\overline{\alpha}^1 = 1$ then derive a contradiction.

Assume that $\underline{\alpha}^1 = 0$, and note that an investigator with $\alpha_I = 0$ cares only about avoiding mistaken convictions. If she tries the case in the first period when $s = G$, this will lead to $\left(1-\gamma^G\right)\rho_{NG}$ mistaken convictions. On the other hand, by trying the case, she changes her probability of retention by $r(G)$, and if retained, she will avoid mistaken convictions in two circumstances: her replacement is neutral and receives an incorrect signal about an innocent defendant who is then mistakenly convicted, or her replacement is aggressive, the defendant is innocent, and the defendant is mistakenly convicted. For the investigator at

$\alpha_I = 0$ to try when $s = G$ requires that

$$\begin{aligned}
\left(1-\gamma^G\right)\rho_{NG} &\leq r(G)\left[\phi_n(1-\pi)(1-q)\rho_{NG} + \phi_a(1-\pi)\rho_{NG}\right] \\
\frac{(1-\pi)(1-q)}{\pi q + (1-\pi)(1-q)} &\leq r(G)\left[\phi_n(1-\pi)(1-q) + \phi_a(1-\pi)\right] \\
\frac{1}{\pi q + (1-\pi)(1-q)} \cdot \frac{1-q}{\phi_n(1-q)+\phi_a} &\leq r(G).
\end{aligned}$$

Substituting in $r(G) = \sigma_C\left[\gamma^G(1-\rho_G) + \left(1-\gamma^G\right)\rho_{NG}\right] + \sigma_A\left[\left(1-\gamma^G\right)(1-\rho_{NG}) + \gamma^G\rho_G\right] - \sigma_D$ from Equation 4, and rearranging terms this reduces to

$$\sigma_D \leq \begin{array}{c} \sigma_C\left[\gamma^G(1-\rho_G) + \left(1-\gamma^G\right)\rho_{NG}\right] + \sigma_A\left[\left(1-\gamma^G\right)(1-\rho_{NG}) + \gamma^G\rho_G\right] \\ -\tfrac{1}{\pi q + (1-\pi)(1-q)} \cdot \tfrac{1-q}{\phi_n(1-q)+\phi_a}. \end{array} \tag{7}$$

Assume also that $\overline{\alpha}^1 = 1$. An investigator for whom $\alpha_I = 1$ cares only about ensuring conviction of the guilty, so for her to drop when $s = NG$ the number of foregone correct first period convictions must be less than the expected decrease in the number of correct second-period convictions if she drops the first period case:

$$\begin{aligned}
\gamma^{NG}(1-\rho_G) &\leq -r(NG)\left[\phi_p\pi(1-\rho_G) + \phi_n\pi(1-q)(1-\rho_G)\right] \\
\frac{\pi(1-q)}{\pi(1-q) + (1-\pi)q} &\leq -r(NG)\left[\phi_p\pi + \phi_n\pi(1-q)\right] \\
\frac{1}{\pi(1-q) + (1-\pi)q} \cdot \frac{1-q}{\phi_p + \phi_n(1-q)} &\leq -r(NG).
\end{aligned}$$

Substituting in $r(NG) = \sigma_C\left[\gamma^{NG}(1-\rho_G) + \left(1-\gamma^{NG}\right)\rho_{NG}\right] + \sigma_A\left[\left(1-\gamma^{NG}\right)(1-\rho_{NG}) + \gamma^{NG}\rho_G\right] - \sigma_D$ from Equation 4, and rearranging terms this reduces to

$$\begin{array}{c} \sigma_C\left[\gamma^{NG}(1-\rho_G) + \left(1-\gamma^{NG}\right)\rho_{NG}\right] + \sigma_A\left[\left(1-\gamma^{NG}\right)(1-\rho_{NG}) + \gamma^{NG}\rho_G\right] \\ +\tfrac{1}{\pi(1-q)+(1-\pi)q} \cdot \tfrac{1-q}{\phi_p+\phi_n(1-q)} \end{array} \leq \sigma_D. \tag{8}$$

Because the same value of σ_D must satisfy Equations 7 and 8, to have $\underline{\alpha}^1 = 0$ and $\overline{\alpha}^1 = 1$ requires that

$$\begin{array}{rcl} \sigma_C\left[\gamma^{NG}(1-\rho_G)+\left(1-\gamma^{NG}\right)\rho_{NG}\right] & & \sigma_C\left[\gamma^{G}(1-\rho_G)+\left(1-\gamma^{G}\right)\rho_{NG}\right] \\ +\sigma_A\left[\left(1-\gamma^{NG}\right)(1-\rho_{NG})+\gamma^{NG}\rho_G\right] & \leq & +\sigma_A\left[\left(1-\gamma^{G}\right)(1-\rho_{NG})+\gamma^{G}\rho_G\right] \\ +\frac{1}{\pi(1-q)+(1-\pi)q}\frac{1-q}{\phi_p+\phi_n(1-q)} & & -\frac{1}{\pi q+(1-\pi)(1-q)}\frac{1-q}{\phi_n(1-q)+\phi_a} \end{array}$$

$$\begin{array}{rcl} \frac{1}{\pi(1-q)+(1-\pi)q}\frac{1-q}{\phi_p+\phi_n(1-q)} & \leq & \left(\gamma^{G}-\gamma^{NG}\right)(1-\rho_G-\rho_{NG})(\sigma_C-\sigma_A). \\ +\frac{1}{\pi q+(1-\pi)(1-q)}\frac{1-q}{\phi_n(1-q)+\phi_a} & & \end{array}$$

Note that the right hand side is strictly less than 1, so a necessary condition for $\underline{\alpha}^1 = 0$ and $\overline{\alpha}^1 = 1$ is

$$\frac{1}{\pi(1-q)+(1-\pi)q}\cdot\frac{1-q}{\phi_p+\phi_n(1-q)}+\frac{1}{\pi q+(1-\pi)(1-q)}\cdot\frac{1-q}{\phi_n(1-q)+\phi_a}<1.$$

Using the fact that $\phi_p = F(\underline{\alpha}), \phi_n = F(\bar{\alpha}) - F(\underline{\alpha})$, and $\phi_a = 1 - F(\bar{\alpha})$, this can be re-written as

$$\begin{array}{rcl} \frac{1}{\pi(1-q)+(1-\pi)q}\cdot\frac{1-q}{F(\underline{\alpha})+(1-q)(F(\bar{\alpha})-F(\underline{\alpha}))} & & \\ +\frac{1}{\pi q+(1-\pi)(1-q)}\cdot\frac{1-q}{(1-q)(F(\bar{\alpha})-F(\underline{\alpha}))+1-F(\bar{\alpha})} & < & 1. \end{array} \quad (9)$$

Note that under our assumptions in the main text about the distribution F we can show that $\frac{1-q}{\underline{\alpha}+(1-q)(\bar{\alpha}-\underline{\alpha})} < \frac{1-q}{F(\underline{\alpha})+(1-q)(F(\bar{\alpha})-F(\underline{\alpha}))}$, because

$$\begin{array}{rcl} F(\underline{\alpha})+(1-q)(F(\bar{\alpha})-F(\underline{\alpha})) & < & \underline{\alpha}+(1-q)(\bar{\alpha}-\underline{\alpha}) \\ (1-q)\left[(1-\bar{\alpha})-(1-F(\bar{\alpha}))\right] & < & q\left[\underline{\alpha}-F(\underline{\alpha})\right] \\ \frac{1-q}{q} & < & \frac{\underline{\alpha}-F(\underline{\alpha})}{(1-\bar{\alpha})-(1-F(\bar{\alpha}))} \end{array}$$

and that $\frac{1-q}{(1-q)(\bar{\alpha}-\underline{\alpha})+1-\bar{\alpha}} < \frac{1-q}{(1-q)(F(\bar{\alpha})-F(\underline{\alpha}))+(1-F(\bar{\alpha}))}$, because

$$\begin{aligned}
(1-q)\left(F\left(\bar{\alpha}\right)-F\left(\underline{\alpha}\right)\right)+\left(1-F\left(\bar{\alpha}\right)\right) &< (1-q)\left(\bar{\alpha}-\underline{\alpha}\right)+1-\bar{\alpha} \\
(1-q)\left[\underline{\alpha}-F\left(\underline{\alpha}\right)\right] &< \bar{\alpha}-q\bar{\alpha}+1-\bar{\alpha}-1+F\left(\bar{\alpha}\right)-F\left(\bar{\alpha}\right)+qF\left(\bar{\alpha}\right) \\
(1-q)\left[\underline{\alpha}-F\left(\underline{\alpha}\right)\right] &< q\left[\left(1-\bar{\alpha}\right)-\left(1-F\left(\bar{\alpha}\right)\right)\right] \\
\frac{\underline{\alpha}-F\left(\underline{\alpha}\right)}{\left(1-\bar{\alpha}\right)-\left(1-F\left(\bar{\alpha}\right)\right)} &< \frac{q}{1-q}.
\end{aligned}$$

Thus, for Equation 9 to hold requires that

$$\begin{aligned}
&\frac{1}{\pi(1-q)+(1-\pi)q}\cdot\frac{1-q}{\underline{\alpha}+(1-q)\left(\bar{\alpha}-\underline{\alpha}\right)} \\
&+\frac{1}{\pi q+(1-\pi)(1-q)}\cdot\frac{1-q}{(1-q)\left(\bar{\alpha}-\underline{\alpha}\right)+1-\bar{\alpha}} \quad < \quad 1
\end{aligned}$$

$$\begin{aligned}
&\frac{1}{\pi(1-q)+(1-\pi)q}\cdot\frac{1-q}{q\underline{\alpha}+(1-q)\bar{\alpha}} \\
&+\frac{1}{\pi q+(1-\pi)(1-q)}\cdot\frac{1-q}{q\left(1-\bar{\alpha}\right)+(1-q)\left(1-\underline{\alpha}\right)} \quad < \quad 1.
\end{aligned} \tag{10}$$

To simplify Equation 10, we work on the terms $\frac{1-q}{q\underline{\alpha}+(1-q)\bar{\alpha}}$ and $\frac{1-q}{q(1-\bar{\alpha})+(1-q)(1-\underline{\alpha})}$, using the expressions derived in the proof of Lemma 1:

$$\begin{aligned}
\underline{\alpha} &= \frac{\left(1-\gamma^{G}\right)\rho_{NG}}{\gamma^{G}\left(1-\rho_{G}\right)+\left(1-\gamma^{G}\right)\rho_{NG}} \\
&= \frac{\frac{(1-\pi)(1-q)}{\pi q+(1-\pi)(1-q)}\rho_{NG}}{\frac{\pi q}{\pi q+(1-\pi)(1-q)}\left(1-\rho_{G}\right)+\frac{(1-\pi)(1-q)}{\pi q+(1-\pi)(1-q)}\rho_{NG}} \\
&= \frac{(1-\pi)(1-q)\rho_{NG}}{\pi q\left(1-\rho_{G}\right)+(1-\pi)(1-q)\rho_{NG}},
\end{aligned}$$

and

$$\begin{aligned}
\bar{\alpha} &= \frac{\left(1-\gamma^{NG}\right)\rho_{NG}}{\gamma^{NG}\left(1-\rho_G\right)+\left(1-\gamma^{NG}\right)\rho_{NG}} \\
&= \frac{(1-\pi)\,q\rho_{NG}}{\pi\,(1-q)\,(1-\rho_G)+(1-\pi)\,q\rho_{NG}}.
\end{aligned}$$

Substituting for $\underline{\alpha}$ and $\bar{\alpha}$ and simplifying yields

$$\frac{1-q}{q\underline{\alpha}+(1-q)\,\bar{\alpha}} = \frac{1}{(1-\pi)\,q\rho_{NG}}\frac{1}{\frac{1}{\pi q(1-\rho_G)+(1-\pi)(1-q)\rho_{NG}}+\frac{1}{\pi(1-q)(1-\rho_G)+(1-\pi)q\rho_{NG}}}, \tag{11}$$

and

$$\frac{1-q}{q\,(1-\bar{\alpha})+(1-q)\,(1-\underline{\alpha})} = \frac{1}{\pi q\,(1-\rho_G)}\frac{1}{\frac{1}{\pi(1-q)(1-\rho_G)+(1-\pi)q\rho_{NG}}+\frac{1}{\pi q(1-\rho_G)+(1-\pi)(1-q)\rho_{NG}}}. \tag{12}$$

Substituting in Equations 11 and 12 into Equation 10 yields

$$\begin{array}{c}\left[\frac{1}{\pi(1-q)+(1-\pi)q}\cdot\frac{1}{(1-\pi)q\rho_{NG}}+\frac{1}{\pi q+(1-\pi)(1-q)}\cdot\frac{1}{\pi q(1-\rho_G)}\right] \\ \cdot\left[\frac{1}{\frac{1}{\pi(1-q)(1-\rho_G)+(1-\pi)q\rho_{NG}}+\frac{1}{\pi q(1-\rho_G)+(1-\pi)(1-q)\rho_{NG}}}\right]\end{array} < 1.$$

Multiplying out the second term on the left hand side, this requires that $\frac{1}{\pi(1-q)+(1-\pi)q}\cdot\frac{1}{(1-\pi)q\rho_{NG}}+\frac{1}{\pi q+(1-\pi)(1-q)}\cdot\frac{1}{\pi q(1-\rho_G)} < \frac{1}{\pi(1-q)(1-\rho_G)+(1-\pi)q\rho_{NG}}+\frac{1}{\pi q(1-\rho_G)+(1-\pi)(1-q)\rho_{NG}}$. However, breaking this into two separate inequalities, we see that the inequality cannot hold. Specifically,

$$\begin{aligned}
\frac{1}{\pi\,(1-q)+(1-\pi)\,q}\cdot\frac{1}{(1-\pi)\,q\rho_{NG}} &> \frac{1}{\pi\,(1-q)\,(1-\rho_G)+(1-\pi)\,q\rho_{NG}} \\
\pi\,(1-q)\,(1-\rho_G)+(1-\pi)\,q\rho_{NG} &> \left[\pi\,(1-q)+(1-\pi)\,q\right](1-\pi)\,q\rho_{NG} \\
\frac{\pi\,(1-q)\,(1-\rho_G)}{(1-\pi)\,q\rho_{NG}}+1 &> \pi\,(1-q)+(1-\pi)\,q
\end{aligned}$$

and

$$\begin{aligned}
\frac{1}{\pi q+(1-\pi)(1-q)} \cdot \frac{1}{\pi q\left(1-\rho_G\right)} &> \frac{1}{\pi q\left(1-\rho_G\right)+(1-\pi)(1-q) \rho_{NG}} \\
\pi q\left(1-\rho_G\right)+(1-\pi)(1-q) \rho_{NG} &> [\pi q+(1-\pi)(1-q)] \pi q\left(1-\rho_G\right) \\
1+\frac{(1-\pi)(1-q) \rho_{NG}}{\pi q\left(1-\rho_G\right)} &> \pi q+(1-\pi)(1-q),
\end{aligned}$$

where the last line of each of these inequalities holds because $\pi \in (0,1)$ and $q \in (0,1)$, so $1 > \pi(1-q) + (1-\pi) q$ and $1 > \pi q + (1-\pi)(1-q)$. Thus we have reached a contradiction.■

Proof of Lemmas 4 and 5 The proof of these lemmas is based on the fact that for any cutpoints $\underline{\alpha}^1$ and $\overline{\alpha}^1$ an executive who is either passive or aggressive has a strict incentive to retain or remove the investigator, based solely on her decision to try or drop the case in the first period.

There are four cases to consider: **(i)** $\underline{\alpha}^1 < \underline{\alpha}$ and $\overline{\alpha}^1 < \overline{\alpha}$, **(ii)** $\underline{\alpha}^1 > \underline{\alpha}$ and $\overline{\alpha}^1 > \overline{\alpha}$, **(iii)** $\underline{\alpha}^1 < \underline{\alpha}$ and $\overline{\alpha}^1 > \overline{\alpha}$, **(iv)** $\underline{\alpha}^1 > \underline{\alpha}$ and $\overline{\alpha}^1 < \overline{\alpha}$. We show below that in each of these four cases, after the first period policy outcome is revealed, executive beliefs about the probability that the incumbent investigator is passive can be ordered as follows: $\mu_p(D) > \phi_p > \mu_p(C) \geq \mu_p(A)$. Because the first period outcome must be A, C or D, ϕ_p is a weighted average of $\mu_p(A), \mu_p(C)$, and $\mu_p(D)$. Thus it is sufficient to prove that $\phi_p > \mu_p(C) \geq \mu_p(A)$ and $\mu_p(D) > \phi_p$ follows. Similarly for beliefs about the probability that the investigator is aggressive, we show that $\phi_a < \mu_a(C) \leq \mu_a(A)$ so that $\mu_a(D) < \phi_a < \mu_a(C) \leq \mu_a(A)$.

For a passive executive, a passive investigator produces the highest expected utility and an aggressive investigator produces the lowest expected utility in the second period. If D is the first period outcome then the probability of the best type is greater than the prior and the probability of the worst type is lower than the prior. Thus it is strictly optimal to retain, setting $\sigma_D = 1$. On the flip side, if C is the first period outcome then $\phi_p > \mu_p(C)$ and $\phi_a < \mu_a(C)$, so it is strictly optimal to remove the investigator, setting $\sigma_C = 0$. Likewise $\sigma_A = 0$ is optimal. Because our analysis allows for any $\underline{\alpha}^1$ and $\overline{\alpha}^1$, except for the case of $\underline{\alpha}^1 = 0$ and $\overline{\alpha}^1 = 1$, which we ruled out in Lemma 3*(v)*, we thus establish a unique equilibrium for the case of a passive executive. A similar argument establishes that for an aggressive executive there is a unique equilibrium because for any $\underline{\alpha}^1$ and $\overline{\alpha}^1$ it is optimal to set $\sigma_D = 0$, and $\sigma_C = \sigma_A = 1$.

We now give the details of the executive's beliefs in cases **(i)-(iv)**.

For **case (i)**, $\mu_p(A) = \frac{\left[F(\underline{\alpha}) - F\left(\underline{\alpha}^1\right)\right]\Pr(s=G)\Pr(T=A|s=G)}{[1-F(\underline{\alpha}^1)]\Pr(s=G)\Pr(T=A|s=G)+[1-F(\overline{\alpha}^1)]\Pr(s=NG)\Pr(T=A|s=NG)}$ and $\mu_p(C) = \frac{\left[F(\underline{\alpha}) - F\left(\underline{\alpha}^1\right)\right]\Pr(s=G)\Pr(T=C|s=G)}{[1-F(\underline{\alpha}^1)]\Pr(s=G)\Pr(T=C|s=G)+[1-F(\overline{\alpha}^1)]\Pr(s=NG)\Pr(T=C|s=NG)}$. We show that $\mu_p(A) < \mu_p(C)$, by multiplying out these two expressions, and cancelling terms to get

$$\Pr(T = C|s = NG)\Pr(T = A|s = G) < \Pr(T = A|s = NG)\Pr(T = C|s = G). \tag{13}$$

Expanding out Equation 13, we need

$$\begin{aligned}
\left[\gamma^{NG}(1-\rho_G) + \left(1-\gamma^{NG}\right)\rho_{NG}\right] \cdot \left[\gamma^G\rho_G + \left(1-\gamma^G\right)(1-\rho_{NG})\right] &< \left[\gamma^{NG}\rho_G + \left(1-\gamma^{NG}\right)(1-\rho_{NG})\right] \cdot \left[\gamma^G(1-\rho_G) + \left(1-\gamma^G\right)\rho_{NG}\right] \\
\gamma^{NG}(1-\rho_G)\left(1-\gamma^G\right)(1-\rho_{NG}) + \left(1-\gamma^{NG}\right)\rho_{NG}\gamma^G\rho_G &< \gamma^{NG}\rho_G\left(1-\gamma^G\right)\rho_{NG} + \left(1-\gamma^{NG}\right)(1-\rho_{NG})\gamma^G(1-\rho_G) \\
0 &< \left[\left(1-\gamma^{NG}\right)\gamma^G - \gamma^{NG}\left(1-\gamma^G\right)\right]\left[(1-\rho_{NG})(1-\rho_G) - \rho_{NG}\rho_G\right].
\end{aligned}$$

The first term in brackets is strictly greater than zero because $\gamma^G > \gamma^{NG}$ and the second term in brackets is strictly greater than zero because $\rho_{NG} < 1/2$ and $\rho_G < 1/2$.

To show $\mu_p(C) < \phi_p = F(\underline{\alpha})$ note that in case (i), $\overline{\alpha}^1 < \overline{\alpha}$ so the second term in the denominator of

$$\mu_p(C) = \frac{\left[F(\underline{\alpha}) - F\left(\underline{\alpha}^1\right)\right]\Pr(s = G)\Pr(T = C|s = G)}{\left[1 - F\left(\underline{\alpha}^1\right)\right]\Pr(s = G)\Pr(T = C|s = G) + \left[1 - F\left(\overline{\alpha}^1\right)\right]\Pr(s = NG)\Pr(T = C|s = NG)} \tag{14}$$

is strictly greater than zero, and it's sufficient to show that:

$$\begin{aligned}
\frac{\left[F(\underline{\alpha}) - F\left(\underline{\alpha}^1\right)\right] \Pr(s=G)\Pr(T=C|s=G)}{\left[1-F\left(\underline{\alpha}^1\right)\right] \Pr(s=G)\Pr(T=C|s=G)} &\leq F(\underline{\alpha}) \\
F(\underline{\alpha}) - F\left(\underline{\alpha}^1\right) &\leq F(\underline{\alpha}) - F(\underline{\alpha})F\left(\underline{\alpha}^1\right) \\
F(\underline{\alpha})F\left(\underline{\alpha}^1\right) &\leq F\left(\underline{\alpha}^1\right). \qquad (15)
\end{aligned}$$

Now we turn to beliefs about the probability that the investigator is aggressive in case (i). Here $\mu_a(C) = \frac{[1-F(\overline{\alpha})][\Pr(s=G)\Pr(T=C|s=G)+\Pr(s=NG)\Pr(T=C|s=NG)]}{[1-F(\overline{\alpha}^1)][\Pr(s=G)\Pr(T=C|s=G)+\Pr(s=NG)\Pr(T=C|s=NG)]+[F(\overline{\alpha}^1)-F(\underline{\alpha}^1)]\Pr(s=G)\Pr(T=C|s=G)}$ and $\mu_a(A) = \frac{[1-F(\overline{\alpha})][\Pr(s=G)\Pr(T=A|s=G)+\Pr(s=NG)\Pr(T=A|s=NG)]}{[1-F(\overline{\alpha}^1)][\Pr(s=G)\Pr(T=A|s=G)+\Pr(s=NG)\Pr(T=A|s=NG)]+[F(\overline{\alpha}^1)-F(\underline{\alpha}^1)]\Pr(s=G)\Pr(T=A|s=G)}$. Straightforward though tedious algebra shows that $\mu_a(C) \leq \mu_a(A)$.

For $\phi_a < \mu_a(C)$, we add $\left[F(\overline{\alpha}^1) - F\left(\underline{\alpha}^1\right)\right]\Pr(s=NG)\Pr(T=C|s=NG)$ to the denominator of the above expression for $\mu_a(C)$, cancel terms and note that $\mu_a(C) > \frac{[1-F(\overline{\alpha})][\Pr(s=G)\Pr(T=C|s=G)+\Pr(s=NG)\Pr(T=C|s=NG)]}{\left[1-F(\overline{\alpha}^1)\right][\Pr(s=G)\Pr(T=C|s=G)+\Pr(s=NG)\Pr(T=C|s=NG)]+\left[F(\overline{\alpha}^1)-F(\underline{\alpha}^1)\right][\Pr(s=G)\Pr(T=C|s=G)+\Pr(s=NG)\Pr(T=C|s=NG)]} = \frac{1-F(\overline{\alpha})}{1-F(\underline{\alpha}^1)} \geq 1 - F(\overline{\alpha})$.

For **case (ii)**, because $\underline{\alpha}^1 > \underline{\alpha}$ no passive type ever tries so $\mu_p(C) = \mu_p(A) = 0$ and thus $\mu_p(D) > \phi_p > \mu_p(C) \geq \mu_p(A)$.

In case (ii), $\mu_a(A) = \frac{\left[1-F\left(\overline{\alpha}^1\right)\right]\Pr(s=NG)\Pr(T=A|s=NG)+[1-F(\overline{\alpha})]\Pr(s=G)\Pr(T=A|s=G)}{[1-F(\overline{\alpha}^1)]\Pr(s=NG)\Pr(T=A|s=NG)+[1-F(\overline{\alpha})]\Pr(s=G)\Pr(T=A|s=G)+[F(\overline{\alpha})-F(\underline{\alpha}^1)]\Pr(s=G)\Pr(T=A|s=G)}$ and $\mu_a(C) = \frac{\left[1-F\left(\overline{\alpha}^1\right)\right]\Pr(s=NG)\Pr(T=C|s=NG)+[1-F(\overline{\alpha})]\Pr(s=G)\Pr(T=C|s=G)}{[1-F(\overline{\alpha}^1)]\Pr(s=NG)\Pr(T=C|s=NG)+[1-F(\overline{\alpha})]\Pr(s=G)\Pr(T=C|s=G)+[F(\overline{\alpha})-F(\underline{\alpha}^1)]\Pr(s=G)\Pr(T=C|s=G)}$. To show that $\mu_a(C) \leq \mu_a(A)$, we multiply out and cancel several terms to get $\Pr(T=A|s=G)\left[1-F\left(\overline{\alpha}^1\right)\right]$ $\Pr(s=NG)\Pr(T=C|s=NG)+$ $\Pr(T=A|s=G)$ $[1-F(\overline{\alpha})]\Pr(s=G)$ $\Pr(T=C|s=G) \leq$ $\Pr(T=C|s=G)\left[1-F\left(\overline{\alpha}^1\right)\right]$ $\Pr(s=NG)$ $\Pr(T=A|s=NG)+$ $\Pr(T=C|s=G)$ $[1-F(\overline{\alpha})]$ $\Pr(s=G)$ $\Pr(T=A|s=G)$, which reduces to $\Pr(T=A|s=G)$ $\Pr(T=C|s=NG) \leq \Pr(T=C|s=G)$ $\Pr(T=A|s=NG)$, a condition that we already checked above as Equation 13.

For $\phi_a < \mu_a(C)$ we need

$1-F\left(\overline{\alpha}\right) < \frac{\left[1-F\left(\overline{\alpha}^1\right)\right] \Pr(s=NG) \Pr(T=C|s=NG)+[1-F(\overline{\alpha})] \Pr(s=G) \Pr(T=C|s=G)}{[1-F(\overline{\alpha}^1)] \Pr(s=NG) \Pr(T=C|s=NG)+[1-F(\overline{\alpha})] \Pr(s=G) \Pr(T=C|s=G)+[F(\overline{\alpha})-F(\underline{\alpha}^1)] \Pr(s=G) \Pr(T=C|s=G)}$. Adding $F\left(\underline{\alpha}^1\right) \Pr(s=G) \Pr(T=C|s=G)$ to the denominator decreases the right hand side, so it is sufficient to show that

$$\begin{aligned} 1-F\left(\overline{\alpha}\right) &\leq \frac{\left[1-F\left(\overline{\alpha}^1\right)\right] \Pr(s=NG) \Pr(T=C|s=NG)+[1-F(\overline{\alpha})] \Pr(s=G) \Pr(T=C|s=G)}{\left[1-F\left(\overline{\alpha}^1\right)\right] \Pr(s=NG) \Pr(T=C|s=NG)+\Pr(s=G) \Pr(T=C|s=G)} \\ \left[1-F\left(\overline{\alpha}\right)\right]\left[1-F\left(\overline{\alpha}^1\right)\right] &\leq \left[1-F\left(\overline{\alpha}^1\right)\right]. \end{aligned} \tag{16}$$

This inequality holds because $F\left(\overline{\alpha}\right) \in (0,1)$ and $F\left(\overline{\alpha}^1\right) \in [0,1]$.

For **case (iii)**, the argument for $\mu_p(D) > \phi_p > \mu_p\left(C\right) \geq \mu_p\left(A\right)$ is almost identical to case (i). The only difference is that we need to allow for the possibility that $\overline{\alpha}^1 = 1$, in which case the second term in the denominator of Equation 14 is zero. So we need the inequality in Equation 15 to hold strictly, but this is guaranteed because when $\overline{\alpha}^1 = 1$ Lemma 3*(v)* tells us that $\underline{\alpha}^1 > 0$ and hence $F\left(\underline{\alpha}^1\right) > 0$.

The argument for $\mu_a(D) < \phi_a < \mu_a\left(C\right) \leq \mu_a\left(A\right)$ is almost identical to case (ii). The only difference is that we need to allow for the possibility that $\underline{\alpha}^1 = 0$, in which case $F\left(\underline{\alpha}^1\right) \Pr(s=G) \Pr(T=C|s=G) = 0$. So we need Equation 16 to hold strictly, but this is guaranteed because when $\underline{\alpha}^1 = 0$ Lemma 3*(v)* tells us that $\overline{\alpha}^1 < 1$ and thus $F\left(\overline{\alpha}^1\right) \in (0,1)$.

For **case (iv)**, the argument for $\mu_p(D) > \phi_p > \mu_p\left(C\right) \geq \mu_p\left(A\right)$ is identical to case (ii). The argument for $\mu_a(D) < \phi_a < \mu_a\left(C\right) \leq \mu_a\left(A\right)$ is identical to case (i).■

Proof of Lemma 6 We first establish existence of the cutpoints. We do this for α^D. The arguments for α^C and α^A are essentially similar. For α^D, note that the difference in the executive's expected utility difference from retaining versus removing the investigator is a linear, and hence monotonic, function of α_E. Specifically, the utility difference is

$-\mu_p(D)\alpha_E\pi - \mu_n(D)\left[\alpha_E\pi(q\rho_G + (1-q)) + (1-\alpha_E)(1-\pi)\left(1-q\right)\rho_{NG}\right]$

$-\mu_a(D)\left[\alpha_E\pi\rho_G + (1-\alpha_E)(1-\pi)\rho_{NG}\right]$

$$-\left\{-\phi_p \alpha_E \pi - \phi_n \left[\alpha_E \pi (q\rho_G + (1-q)) + (1-\alpha_E)(1-\pi)(1-q)\rho_{NG}\right] - \phi_a \left[\alpha_E \pi \rho_G + (1-\alpha_E)(1-\pi)\rho_{NG}\right]\right\},$$

which equals

$$\begin{aligned} &\alpha_E \pi \left\{\left[\phi_p - \mu_p(D)\right] + \left[\phi_n - \mu_n(D)\right](q\rho_G + (1-q)) + \left[\phi_a - \mu_a(D)\right]\rho_G\right\} \\ &+(1-\alpha_E)(1-\pi)\left\{\left[\phi_n - \mu_n(D)\right](1-q)\rho_{NG} + \left[\phi_a - \mu_a(D)\right]\rho_{NG}\right\} \end{aligned} \tag{17}$$

Also, as established in the proof of Propositions 4 and 5 an executive with $\alpha_E = \underline{\alpha}$ strictly prefers to retain the investigator when she drops the first period case and an executive with $\alpha_E = \overline{\alpha}$ strictly prefers to remove her. Thus because Equation 17 is linear in α_E there exists a cutpoint $\alpha^D \in (\underline{\alpha}, \overline{\alpha})$ such that an executive with $\alpha_E < \alpha^D$ prefers to retain whereas an executive with $\alpha_E > \alpha^D$ prefers to remove the investigator.

To show that α^D is a continuous function of $\underline{\alpha}^1$ and $\overline{\alpha}^1$, we first note that voter beliefs $\mu_p(D), \mu_n(D)$, and $\mu_a(D)$ are functions of $\underline{\alpha}^1$ and $\overline{\alpha}^1$:

$$\mu_p(D) = \frac{\min\left\{F(\underline{\alpha}), F(\underline{\alpha}^1)\right\} + \Pr(s = NG)\left(F(\underline{\alpha}) - \min\left\{F(\underline{\alpha}), F(\underline{\alpha}^1)\right\}\right)}{F(\underline{\alpha}^1) + \Pr(s = NG)\left(F\left(\overline{\alpha}^1\right) - F(\underline{\alpha}^1)\right)},$$

$$\mu_a(D) = \frac{\Pr(s = NG)\left(F\left(\overline{\alpha}^1\right) - \min\left\{F\left(\overline{\alpha}^1\right), F(\overline{\alpha})\right\}\right)}{F(\underline{\alpha}^1) + \Pr(s = NG)\left(F\left(\overline{\alpha}^1\right) - F(\underline{\alpha}^1)\right)},$$

and

$$\mu_n(D) = 1 - \mu_p(D) - \mu_a(D).$$

Next, we explicitly solve for α^D by setting Equation 17 equal to zero, yielding:

$\alpha^D = \frac{(1-\pi)\{[\phi_n - \mu_n(D)](1-q)\rho_{NG} + [\phi_a - \mu_a(D)]\rho_{NG}\}}{(1-\pi)\{[\phi_n - \mu_n(D)](1-q)\rho_{NG} + [\phi_a - \mu_a(D)]\rho_{NG}\} - \pi\left\{\left[\phi_p - \mu_p(D)\right] + [\phi_n - \mu_n(D)](q\rho_G + (1-q)) + [\phi_a - \mu_a(D)]\rho_G\right\}}$. Note that α^D is a continuous function of $\mu_p(D), \mu_n(D)$, and $\mu_a(D)$ so it is a continuous function of $\underline{\alpha}^1$ and $\overline{\alpha}^1$.

We now order the cutpoints relative to each other. First we note that it's impossible to have both $\alpha^C < \alpha^D$ and $\alpha^A < \alpha^D$. If this were the case then any executive type with $\alpha_E \in (\max\left\{\alpha^C, \alpha^A\right\}, \alpha^D)$ would strictly prefer to retain the incumbent investigator after all possible first period outcomes. This is a contradiction because the replacement is drawn from the same pool as the incumbent. A similar contradiction results if $\alpha^C > \alpha^D$ and $\alpha^A > \alpha^D$.

The final part of the argument is to show that $\alpha^C \leq \alpha^A$, which enables us to conclude that $\alpha^C \leq \alpha^D \leq \alpha^A$. To prove that $\alpha^C \leq \alpha^A$, we show that if an executive's expected utility from retaining the investigator after an acquittal is greater than his utility from retaining after a conviction then his utility from retaining after a conviction is greater than his utility from a new randomly drawn investigator. We denote these utilities as $U(old|C)$, $U(old|A)$, and $U(rndm)$. We also will use $U(\alpha > x)$ to denote an executive's expected utility from a investigator randomly drawn from the portion of the investigator type distribution F that is greater than x. Similarly $U(\alpha \in (x, y))$ denotes expected utility from a investigator drawn from the distribution F restricted to the interval (x, y).

First note that if $\underline{\alpha}^1 > \underline{\alpha}$ then, as shown in the proof of Lemmas 4 and 5, $\mu_a(C) \leq \mu_a(A)$ and because passive investigators never choose $x = T$ when $\underline{\alpha}^1 > \underline{\alpha}$, $\mu_p(C) = \mu_p(A) = 0$, so for a neutral executive we always have $U(old|C) \geq U(old|A)$.

The argument is more complicated when $\underline{\alpha}^1 \leq \underline{\alpha}$. We proceed in four steps.

Step 1. We first show that $\Pr\left(\alpha > \overline{\alpha}^1|A\right) > \Pr\left(\alpha > \overline{\alpha}^1|C\right) > 1 - F\left(\overline{\alpha}^1\right)$. For $\Pr\left(\alpha > \overline{\alpha}^1|A\right) > \Pr\left(\alpha > \overline{\alpha}^1|C\right)$, $\frac{\left[1-F\left(\overline{\alpha}^1\right)\right][\Pr(s=G)\Pr(T=A|s=G)+\Pr(s=NG)\Pr(T=A|s=NG)]}{[1-F(\overline{\alpha}^1)][\Pr(s=G)\Pr(T=A|s=G)+\Pr(s=NG)\Pr(T=A|s=NG)]+[F(\overline{\alpha}^1)-F(\underline{\alpha}^1)]\Pr(s=G)\Pr(T=A|s=G)}$ must be strictly greater than

$\frac{\left[1-F\left(\overline{\alpha}^1\right)\right][\Pr(s=G)\Pr(T=C|s=G)+\Pr(s=NG)\Pr(T=C|s=NG)]}{[1-F(\overline{\alpha}^1)][\Pr(s=G)\Pr(T=C|s=G)+\Pr(s=NG)\Pr(T=C|s=NG)]+[F(\overline{\alpha}^1)-F(\underline{\alpha}^1)]\Pr(s=G)\Pr(T=C|s=G)}$. After multiplying out and cancelling, this reduces to $\Pr(T = C|s = G)\Pr(T = A|s = NG) > \Pr(T = A|s = G)\Pr(T = C|s = NG)$, which we already checked as Equation 13.

For $\Pr\left(\alpha > \overline{\alpha}^1|C\right) > 1 - F\left(\overline{\alpha}^1\right)$, we need

$\frac{\left[1-F\left(\overline{\alpha}^1\right)\right][\Pr(s=G)\Pr(T=C|s=G)+\Pr(s=NG)\Pr(T=C|s=NG)]}{[1-F(\overline{\alpha}^1)][\Pr(s=G)\Pr(T=C|s=G)+\Pr(s=NG)\Pr(T=C|s=NG)]+[F(\overline{\alpha}^1)-F(\underline{\alpha}^1)]\Pr(s=G)\Pr(T=C|s=G)} > 1 - F\left(\overline{\alpha}^1\right)$. Multiplying out and canceling, this reduces to

$F\left(\overline{\alpha}^1\right)[\Pr(s = G)\Pr(T = C|s = G) + \Pr(s = NG)\Pr(T = C|s = NG)] >$

$\left[F\left(\overline{\alpha}^1\right) - F\left(\underline{\alpha}^1\right)\right]\Pr(s = G)\Pr(T = C|s = G)$, i.e.,

$F\left(\overline{\alpha}^1\right)\Pr(s=NG)\Pr(T=C|s=NG) > -F\left(\underline{\alpha}^1\right)\Pr(s=G)\Pr(T=C|s=G)$.

Step 2. We show that if $U\left(old|A\right) > U\left(old|C\right)$ then $U\left(\alpha>\overline{\alpha}^1\right) > U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)$.

$$\begin{array}{rcl} U\left(old|A\right) & > & U\left(old|C\right) \\ \begin{array}{c}\Pr\left(\alpha>\overline{\alpha}^1|A\right)U\left(\alpha>\overline{\alpha}^1\right) \\ +\Pr\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)|A\right)U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)\end{array} & > & \begin{array}{c}\Pr\left(\alpha>\overline{\alpha}^1|C\right)U\left(\alpha>\overline{\alpha}^1\right) \\ +\Pr\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)|C\right)U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)\end{array}\end{array}$$

Because $\Pr\left(\alpha<\underline{\alpha}^1|A\right)=\Pr\left(\alpha<\underline{\alpha}^1|C\right)=0$, we substitute $1-\Pr\left(\alpha>\overline{\alpha}^1|A\right)$ for $\Pr\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)|A\right)$ and $1-\Pr\left(\alpha>\overline{\alpha}^1|C\right)$ for $\Pr\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)|C\right)$, to get

$$\begin{array}{rcl} \begin{array}{c}\Pr\left(\alpha>\overline{\alpha}^1|A\right)\left[U\left(\alpha>\overline{\alpha}^1\right)-U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)\right] \\ +U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)\end{array} & > & \begin{array}{c}\Pr\left(\alpha>\overline{\alpha}^1|C\right)\left[U\left(\alpha>\overline{\alpha}^1\right)-U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)\right] \\ +U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)\end{array}\end{array}$$

$$\begin{array}{rcl} \begin{array}{c}\left[\Pr\left(\alpha>\overline{\alpha}^1|A\right)-\Pr\left(\alpha>\overline{\alpha}^1|C\right)\right] \\ \cdot\left[U\left(\alpha>\overline{\alpha}^1\right)-U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)\right]\end{array} & > & 0.\end{array}$$

From Step 1 we know that the first term in brackets is strictly greater than zero, so $U\left(\alpha>\overline{\alpha}^1\right) > U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)$.

Step 3. We show that $U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right) > U\left(\alpha<\underline{\alpha}^1\right)$. There are two cases: $\overline{\alpha}^1<\overline{\alpha}$ and $\overline{\alpha}^1>\overline{\alpha}$.

For the first case, if $\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)$ then the investigator is either a neutral type or a passive type, and if $\alpha<\underline{\alpha}^1$ the investigator is a passive type with probability 1, because $\underline{\alpha}^1\leq\underline{\alpha}$. A neutral executive strictly prefers neutral over passive investigators so $U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right) > U\left(\alpha<\underline{\alpha}^1\right)$.

For the second case, $\overline{\alpha}^1>\overline{\alpha}$ implies that if $\alpha>\overline{\alpha}^1$ then the investigator is surely aggressive. From Step 2 we know that $U\left(\alpha>\overline{\alpha}^1\right) > U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)$. Note that the region $\left(\underline{\alpha}^1,\overline{\alpha}^1\right)$ includes some investigators who are passive, some who are neutral, and some who are aggressive. Also, a neutral executive most prefers a neutral investigator so the only way that $U\left(\alpha>\overline{\alpha}^1\right) > U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)$ is if a passive investigator is the executive's least preferred type. Because $\alpha<\underline{\alpha}^1$ implies that the investigator is passive for sure, $U\left(\alpha\in\left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right) > U\left(\alpha<\underline{\alpha}^1\right)$.

Step 4. We show that $U\left(old|C\right) > U\left(rndm\right)$, i.e.,

$$\begin{array}{c}\Pr\left(\alpha > \overline{\alpha}^1|C\right)U\left(\alpha > \overline{\alpha}^1\right)\\ +\Pr\left(\alpha \in \left(\underline{\alpha}^1,\overline{\alpha}^1\right)|C\right)U\left(\alpha \in \left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)\end{array} > \begin{array}{c}\left[1-F\left(\overline{\alpha}^1\right)\right]U\left(\alpha > \overline{\alpha}^1\right)\\ +\left[F\left(\overline{\alpha}^1\right)-F\left(\underline{\alpha}^1\right)\right]U\left(\alpha \in \left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)\\ +F\left(\underline{\alpha}^1\right)U\left(\alpha < \underline{\alpha}^1\right).\end{array}$$

From Step 3, $U\left(\alpha \in \left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right) > U\left(\alpha < \underline{\alpha}^1\right)$ so the inequality will hold if $\Pr\left(\alpha > \overline{\alpha}^1|C\right)U\left(\alpha > \overline{\alpha}^1\right) + \Pr\left(\alpha \in \left(\underline{\alpha}^1,\overline{\alpha}^1\right)|C\right)U\left(\alpha \in \left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right) > \left[1-F\left(\overline{\alpha}^1\right)\right]U\left(\alpha > \overline{\alpha}^1\right) + F\left(\overline{\alpha}^1\right)U\left(\alpha \in \left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)$. Note that $\Pr\left(\alpha > \overline{\alpha}^1|C\right) + \Pr\left(\alpha \in \left(\underline{\alpha}^1,\overline{\alpha}^1\right)|C\right) = 1$ because no investigator with $\alpha_I < \underline{\alpha}^1$ will bring a case to trial. Substituting in and collecting terms, we need

$$\left[\Pr\left(\alpha > \overline{\alpha}^1|C\right) - \left(1-F\left(\overline{\alpha}^1\right)\right)\right]\left[U\left(\alpha > \overline{\alpha}^1\right) - U\left(\alpha \in \left(\underline{\alpha}^1,\overline{\alpha}^1\right)\right)\right] > 0.$$

Step 1 and Step 2 establish that each term is strictly greater than zero.■

Proof of Lemma 7 Lemmas 4 and 5 characterize equilibrium behavior for passive and aggressive executives. Here we handle the case of neutral executives.

For the type of equilibrium in Lemma 7*(i)*, set $\sigma_D = 1, \sigma_C = \sigma_A = 0$ and from Lemma 6 find the cutpoint α^C that arises from the resulting first investigator behavior. The executive behavior in part *(i)* is optimal for any $\alpha_E \leq \alpha^C$.

For the type of equilibrium in Lemma 7*(ii)*, set $\sigma_D = 1$, $\sigma_A = 0$, and for each value $\sigma_C \in (0,1)$ apply Lemma 6 to find the cutpoint α^C implied by the resulting first investigator behavior. For $\alpha_E = \alpha^C$ it is optimal to play $\sigma_D = 1$ and $\sigma_A = 0$ and because this executive type is indifferent after observing a conviction in the first period, he can mix using the particular $\sigma_C \in (0,1)$ that was used to generate α^C.

The construction of equilibria for parts *(iii)*-*(vii)* of the lemma is similar.

Note that no other type of equilibrium can exist for any $\alpha_E \in [\underline{\alpha},\overline{\alpha}]$. Consider any (possibly mixed strategy) executive strategy σ. Given σ, Lemma 3 implies that there exist cutpoints $\underline{\alpha}^1$ and $\overline{\alpha}^1$ for first period investigator behavior. Given these cutpoints, Lemma 6 characterizes cutpoints for executive behavior. It is straightforward to check that the only executive strategies σ that are compatible with these cutpoints are the 7 types listed in Lemma 7.

Finally, we establish existence. To do this, we construct a function $\lambda(z) : [0,7] \to [\underline{\alpha}, \overline{\alpha}]$. Each possible executive strategy σ, whether a pure strategy or a mixed strategy, in parts *(i)-(vii)* of Lemma 7 is specified by some value of z, and we use the intermediate value theorem to show that for any $\alpha_E \in [\underline{\alpha}, \overline{\alpha}]$ there is some z such that $\lambda(z) = \alpha_E$, and thus there is an equilibrium with one of these 7 types of executive behavior.

For any executive strategy $\sigma = (\sigma_D, \sigma_C, \sigma_A)$, let $\alpha^1(\sigma) = \left(\underline{\alpha}^1(\sigma), \overline{\alpha}^1(\sigma)\right)$ represent the cutpoints for optimal first period investigator behavior from Lemma 3, given that the executive's strategy is σ. Given any cutpoints for first period investigator behavior, $\underline{\alpha}^1$ and $\overline{\alpha}^1$, let $\alpha^{CDA}\left(\underline{\alpha}^1, \overline{\alpha}^1\right) = \left(\alpha^C\left(\underline{\alpha}^1, \overline{\alpha}^1\right), \alpha^D\left(\underline{\alpha}^1, \overline{\alpha}^1\right), \alpha^A\left(\underline{\alpha}^1, \overline{\alpha}^1\right)\right)$ be the cutpoints for executive behavior from Lemma 6. Let $\alpha_{(1)} = \alpha^C\left(\underline{\alpha}^1(1,0,0), \overline{\alpha}^1(1,0,0)\right)$, $\alpha_{(2)} = \alpha^C\left(\underline{\alpha}^1(1,1,0), \overline{\alpha}^1(1,1,0)\right)$, $\alpha_{(3)} = \alpha^D\left(\underline{\alpha}^1(1,1,0), \overline{\alpha}^1(1,1,0)\right)$, $\alpha_{(4)} = \alpha^D\left(\underline{\alpha}^1(0,1,0), \overline{\alpha}^1(0,1,0)\right)$, $\alpha_{(5)} = \alpha^A\left(\underline{\alpha}^1(0,1,0), \overline{\alpha}^1(0,1,0)\right)$, $\alpha_{(6)} = \alpha^A\left(\underline{\alpha}^1(0,1,1), \overline{\alpha}^1(0,1,1)\right)$. Define

$$\lambda(z) = \begin{cases} \underline{\alpha} + z\left(\alpha_{(1)} - \underline{\alpha}\right) & \text{for } z \in [0,1] \\ \alpha \in [\underline{\alpha}, \overline{\alpha}] : \sigma_D = 1, \sigma_C = z-1, \sigma_A = 0 \text{ is an equilibrium} & \text{for } z \in [1,2] \\ \alpha_{(2)} + (z-2)\left(\alpha_{(3)} - \alpha_{(2)}\right) & \text{for } z \in [2,3] \\ \alpha \in [\underline{\alpha}, \overline{\alpha}] : \sigma_D = 1-(z-3), \sigma_C = 1, \sigma_A = 0 \text{ is an equilibrium} & \text{for } z \in [3,4] \\ \alpha_{(4)} + (z-4)\left(\alpha_{(5)} - \alpha_{(4)}\right) & \text{for } z \in [4,5] \\ \alpha \in [\underline{\alpha}, \overline{\alpha}] : \sigma_D = 0, \sigma_C = 1, \sigma_A = z-5 \text{ is an equilibrium} & \text{for } z \in [5,6] \\ \alpha_{(6)} + (z-6)(\bar{\alpha} - \alpha_{(6)}) & \text{for } z \in [6,7] \end{cases}.$$

And let

$$\tilde{\sigma}(z) = \begin{cases} (1,0,0) & \text{for } z \in [0,1] \\ (1,z-1,0) & \text{for } z \in [1,2] \\ (1,1,0) & \text{for } z \in [2,3] \\ (1-(z-3),1,0) & \text{for } z \in [3,4] \\ (0,1,0) & \text{for } z \in [4,5] \\ (0,1,z-5) & \text{for } z \in [5,6] \\ (0,1,1) & \text{for } z \in [6,7] \end{cases}.$$

Note that $\tilde{\sigma}(z)$ is a continuous function of z. Thus, by part *(iv)* of Lemma 3, the investigator cutpoints given by $\alpha^1(\tilde{\sigma}(z))$ are continuous in z, which in turn implies, by part 2 of Lemma 6, that cutpoints for executive behavior $\alpha^{CDA}\left(\alpha^1(\tilde{\sigma}(z))\right)$ are a continuous function of z. In particular, we care that $\alpha^C\left(\alpha^1(\tilde{\sigma}(z))\right)$ is a continuous function of z for $z \in [1,2]$, $\alpha^D\left(\alpha^1(\tilde{\sigma}(z))\right)$ is a continuous function of z for $z \in [3,4]$, and $\alpha^A\left(\alpha^1(\tilde{\sigma}(z))\right)$ is a continuous function of z for $z \in [5,6]$.

Thus by construction, $\lambda(z) : [0,7] \to [\underline{\alpha}, \overline{\alpha}]$ is a continuous function where $\lambda(0) = \underline{\alpha}$ and $\lambda(7) = \overline{\alpha}$ so the intermediate value theorem implies that for each $\alpha_E \in [\underline{\alpha}, \overline{\alpha}]$ there exists at least one $z \in [0,7]$ such that $\alpha_E = \lambda(z)$. By construction of $\lambda(z)$ this implies that there exists an equilibrium. If $z \in [0,1] \cup [2,3] \cup [4,5] \cup [6,7]$ this equilibrium is a pure strategy equilibrium from part *(i), (iii), (v),* or *(vii)* of Lemma 7 and if $z \in [1,2] \cup [3,4] \cup [5,6]$ it is a mixed strategy equilibrium from part *(ii), (iv),* or *(vi)* of Lemma 7.

Proof of Lemma 8 The proof of this lemma is straightforward. Here we state the argument for part *(i)*, when the executive is either passive or passive-neutral. The arguments for other types of executives are essentially identical.

For $\underline{\alpha}^1 > \underline{\alpha}$, note that in the equilibrium that we characterize for passive and passive-neutral executives, $r(G) < 0$, i.e., when $s = G$ the investigator is strictly more likely to be retained if she drops than is she tries. In terms of second period policy, any investigator is better off, in expectation, when retained, because there is a strictly positive probability that her replacement will choose a different action than the one she would have chosen. In terms of first period outcomes, an investigator with $\alpha_I \leq \underline{\alpha}$ weakly prefers to drop when $s = G$. Thus, because $r(G) < 0$, when considering both first and second period outcomes any investigator with $\alpha_I \leq \underline{\alpha}$ strictly prefers to drop, and hence $\underline{\alpha}^1 > \underline{\alpha}$.

For $\bar{\alpha}^1 > \bar{\alpha}$, note that in terms of first period outcomes any investigator with $\alpha_I \leq \bar{\alpha}$ weakly prefers to drop when $s = NG$. Thus, because $r(NG) < 0$, when both first and second period outcomes are taken into account any investigator with $\alpha_I \leq \bar{\alpha}$ must strictly prefer to drop when $s = NG$, so $\bar{\alpha}^1 > \bar{\alpha}$.

Proof of Lemma 9 First we solve for $\underline{\alpha}^{ER}$, the cutpoint between executives who prefer passive versus random replacement investigators. Let $U(pass)$ denote utility from a passive replacement and $U(rndm)$ denote utility from a random replacement, where $U(pass) = -\alpha_E \pi$ and

$U(rndm) = -\phi_p \alpha_E \pi - \phi_n [\alpha_E \pi (q\rho_G + (1-q)) + (1-\alpha_E)(1-\pi)((1-q)\rho_{NG})] - \phi_a [\alpha_E \pi \rho_G + (1-\alpha_E)(1-\pi)\rho_{NG}]$.

Combining terms, we get

$$\begin{aligned} U(pass) - U(rndm) &= (1-\pi)\rho_{NG}[\phi_n(1-q) + \phi_a] \\ &\quad -\alpha_E \pi \left[1 - \phi_p - \phi_n(q\rho_G + (1-q)) - \phi_a \rho_G\right] \\ &\quad -\alpha_E (1-\pi)\rho_{NG}[\phi_n(1-q) + \phi_a]. \end{aligned}$$

Note that this is strictly decreasing in α_E so

$$\underline{\alpha}^{ER} = \frac{(1-\pi)\rho_{NG}[\phi_n(1-q) + \phi_a]}{(1-\pi)\rho_{NG}[\phi_n(1-q) + \phi_a] + \pi\left[1 - \phi_p - \phi_n(q\rho_G + (1-q)) - \phi_a\rho_G\right]}.$$

To see that $\underline{\alpha}^{ER} > \underline{\alpha}$, note that a passive investigator will act optimally from the perspective of an executive with $\alpha_E = \underline{\alpha}$, so an executive at $\underline{\alpha}$ strictly prefers a passive investigator over a random replacement.

We now prove that $\underline{\alpha}^{ER} < \alpha_{\underline{E}}$. An executive at $\alpha_{\underline{E}}$ is indifferent between a random draw and an investigator who dropped when behaving according to first period cutpoints $\underline{\alpha}^1 = \underline{\alpha}$ and $\overline{\alpha}^1 \in (\overline{\alpha}, 1)$, i.e., he's at $\alpha_{\underline{E}} = \alpha^D$ from Lemma 6 given these cutpoints. The executive at $\underline{\alpha}^{ER}$ is indifferent between a random draw and a passive investigator, which also means that he's indifferent between a random draw and an investigator who dropped when playing according to first period cutpoints $\underline{\alpha}^1 = \underline{\alpha}$ and $\overline{\alpha}^1 = 1$. Because aggressive investigators are the worst type from this executive's perspective, he must strictly prefer to retain an investigator, rather than replace her with a random replacement, if she drops when behaving according to first period cutpoints $\underline{\alpha}^1 = \underline{\alpha}$ and $\overline{\alpha}^1 \in (\overline{\alpha}, 1)$. Thus by Lemma 6, $\underline{\alpha}^{ER}$ is strictly less than the α^D generated by these cutpoints for investigator behavior.

To solve for $\bar{\alpha}^{ER}$, we take a similar approach, setting the utility from an aggressive replacement, i.e., $U(agg) = -\alpha_E \pi \rho_G - (1-\alpha_E)(1-\pi)\rho_{NG}$, equal to $U(rndm)$. Solving out, we get

$$\bar{\alpha}^{ER} = \frac{(1-\pi)\rho_{NG}\left[1-\phi_n(1-q)-\phi_a\right]}{(1-\pi)\rho_{NG}\left[1-\phi_n(1-q)-\phi_a\right] + \pi(1-\rho_G)\left[\phi_p + \phi_n(1-q)\right]}.$$

Arguments similar to the ones for $\underline{\alpha}^{ER}$ establish that $\alpha_{\bar{E}} < \bar{\alpha}^{ER} < \bar{\alpha}$.

Proof of Lemma 10 First, we prove part 1 of the lemma, for $\alpha_E \in \left(\underline{\alpha}, \underline{\alpha}^{ER}\right)$. Suppose the executive plays $\sigma_D \in (0,1)$, and $\sigma_C = \sigma_A = 0$, which means that $r(G) = r(NG) < 0$. We need to show that it is optimal for the investigator to behave according to cutpoints $\underline{\alpha}^1 = \underline{\alpha}$ when $s = G$ and $\bar{\alpha}^1 \in (\bar{\alpha}, 1)$ when $s = NG$.

If $s = G$ then any investigator with $\alpha_I < \underline{\alpha}$ strictly prefers to drop. In terms of first-period policy, she is better off dropping than trying. And accountability incentives have no effect on a passive investigator because the replacement chosen by the executive will be passive.

If $s = G$, then a neutral investigator with $\alpha_I \in (\underline{\alpha}, \bar{\alpha})$ strictly prefers to try. In terms of first-period policy she is better off trying. In the second period, the signal will be either $s = G$ or $s = NG$. If the investigator tries and loses office by doing so and the second period signal is $s = G$ then she is no worse off as a result of having tried. On the other hand if the second period signal is $s = NG$, the dogmatic passive replacement will do exactly what the neutral investigator would do in the second period, so she winds up being strictly better off as a result of trying in the first period.

If $s = G$, then an investigator with $\alpha_I \geq \bar{\alpha}$ strictly prefers to try. In terms of first-period policy she is better off trying. And because $\alpha_I \geq \bar{\alpha} > \tilde{\alpha}$, for an investigator at α_I, $U(Try|s = G) - U(Drop|s = G) > U(Try|s = NG) - U(Drop|s = NG)$. The worst-case scenario if the investigator tries is that by trying in the first period she loses office and the second period signal is $s = G$ but her dogmatic passive replacement drops the case. However, it's also possible that $s = NG$ in the second period, in which case she would have been strictly better off trying in the first period.

We now turn to the case of $s = NG$. If $s = NG$ then an investigator with $\alpha_I < \bar{\alpha}$ strictly prefers to drop. Doing so makes her strictly better off in terms of first period utility and at least weakly better off in terms of second-period utility.

For an investigator with $\alpha_I \geq \bar{\alpha}$ the investigator's utility difference from trying versus dropping is $\hat{U}_{TD}(\alpha_I; NG, r(NG))$, where we put a hat over the U because with a passive replacement the utility difference is not the same as it was for a random replacement in the proof of Lemma 3. The first period utility difference is the same, based the reasoning in Lemma 1. In the second period, the passive replacement will always drop, whereas the incumbent investigator with $\alpha_I \geq \bar{\alpha}$ will always try if retained. Thus, being replaced avoids some mistaken convictions but also results in some failures to convict, i.e., for $\alpha_I \geq \bar{\alpha}$

$$\begin{aligned}
\hat{U}_{TD}(\alpha_I; NG, r(NG)) &= \alpha_I \gamma^{NG} (1 - \rho_G) - (1 - \alpha_I) \left(1 - \gamma^{NG}\right) \rho_{NG} \\
&\quad - r(NG)(1 - \alpha_I)(1 - \pi)\rho_{NG} \\
&\quad + r(NG)\alpha_I \pi (1 - \rho_G) \\
&= -\rho_{NG}\left[\left(1 - \gamma^{NG}\right) + r(NG)(1 - \pi)\right] \\
&\quad + \alpha_I (1 - \rho_G)\left[\gamma^{NG} + r(NG)\pi\right] \\
&\quad + \alpha_I \rho_{NG}\left[\left(1 - \gamma^{NG}\right) + r(NG)(1 - \pi)\right]. \qquad (18)
\end{aligned}$$

Note that Equation 18 is linear in α_I. Also for $r(NG) < 0$, an investigator at $\bar{\alpha}$ strictly prefers to drop when $s = G$, i.e., $\hat{U}_{TD}(\alpha_I; NG, r(NG)) < 0$, because she is indifferent in terms of first period actions and strictly prefers to be retained rather than to have a dogmatic passive investigator choose second period actions.

There are two possibilities. First, it may be the case that $\hat{U}_{TD}(1; NG, r(NG)) \leq 0$, so $\bar{\alpha}^1 = 1$ and all investigator types strictly prefer to drop when $s = NG$. Second, it may be the case that for some $\bar{\alpha}^1 \in (\bar{\alpha}, 1)$, $\hat{U}_{TD}(\bar{\alpha}^1; NG, r(NG)) = 0$, in which case all investigator types with $\alpha_I < \bar{\alpha}^1$ strictly prefer to drop and those with $\alpha_I > \bar{\alpha}^1$ strictly prefer to try when $s = NG$. Solving out for this case, we get

$$\bar{\alpha}^1 = \frac{\rho_{NG}\left[\left(1-\gamma^{NG}\right) + r(NG)(1-\pi)\right]}{(1-\rho_G)\left[\gamma^{NG} + r(NG)\pi\right] + \rho_{NG}\left[\left(1-\gamma^{NG}\right) + r(NG)(1-\pi)\right]}.$$

Note that as $r(NG) \to 0$, $\bar{\alpha}^1 \to \bar{\alpha}$ (using the expression for $\bar{\alpha}$ in the proof of Lemma 1), and $\bar{\alpha}^1$ is a continuous function of $r(NG)$, and hence of σ. Also, from Equation 18 we can solve for the largest value of $r(NG)$ such that an investigator with $\alpha_I = 1$ will drop in the first period

$$\begin{aligned} \hat{U}_{TD}(1; NG, r(NG)) &\leq 0 \\ (1-\rho_G)\left[\gamma^{NG} + r(NG)\pi\right] + \rho_{NG}\left[\left(1-\gamma^{NG}\right) + r(NG)(1-\pi)\right] &\leq \rho_{NG}\left[\left(1-\gamma^{NG}\right) + r(NG)(1-\pi)\right] \\ r(NG) &\leq -\frac{\gamma^{NG}}{\pi} = \frac{1-q}{\pi(1-q) + (1-\pi)q}. \end{aligned}$$

Let $\sigma_{\bar{D}}$ be the value of σ_D such that $r(NG)$ solves this expression with equality when $\sigma_A = \sigma_C = 0$.

Having characterized the investigator's best response, we now solve for the executive type $\alpha_E \in \left(\underline{\alpha}, \underline{\alpha}^{ER}\right)$ who is indifferent between retaining and replacing the investigator when $x = D$, given cutpoints $\underline{\alpha}^1 = \underline{\alpha}$ and $\bar{\alpha}^1 \in [\bar{\alpha}, 1]$ for first period executive behavior.

For $\bar{\alpha}^1 = \bar{\alpha}$, any investigator who drops a case is either passive or neutral, so an executive at $\alpha_E = \underline{\alpha}$ is indifferent between retaining and replacing.

For $\bar{\alpha}^1 = 1$, because $\underline{\alpha}^1 = \underline{\alpha}$ any investigator who drops is either a passive type who saw $s = G$ (with probability $\frac{\phi_p \Pr(s=G)}{\phi_p \Pr(s=G) + \Pr(s=NG)}$), or a random draw who saw $s = NG$ (with probability $\frac{\Pr(s=NG)}{\phi_p \Pr(s=G) + \Pr(s=NG)}$).

By the definition of $\underline{\alpha}^{ER}$, an executive at $\underline{\alpha}^{ER}$ is indifferent between this lottery and a passive replacement.

For $\bar{\alpha}^1 \in (\bar{\alpha}, 1)$, as in the proof of Lemma 6, the executive's expected utility difference from retaining is $-\mu_p(D)\alpha_E\pi - \mu_n(D)\left[\alpha_E\pi(q\rho_G + (1-q)) + (1-\alpha_E)(1-\pi)(1-q)\rho_{NG}\right]$ $-\mu_a(D)\left[\alpha_E\pi\rho_G + (1-\alpha_E)(1-\pi)\rho_{NG}\right]$. His expected utility from a passive replacement is $-\alpha_E\pi$. Thus his expected utility difference between retaining and removing is

$$\alpha_E\pi\left[1 - \mu_p(D) - \mu_n(D)(q\rho_G + (1-q))\right] - (1-\alpha_E)(1-\pi)\left[\mu_n(D)(1-q)\rho_{NG} + \mu_a(D)\rho_{NG}\right].$$

Note that this is strictly increasing in α_E. Setting it equal to zero yields the executive who is indifferent:

$$\alpha_E = \frac{(1-\pi)\left[\mu_n(D)(1-q)\rho_{NG} + \mu_a(D)\rho_{NG}\right]}{(1-\pi)\left[\mu_n(D)(1-q)\rho_{NG} + \mu_a(D)\rho_{NG}\right] + \pi\left[1 - \mu_p(D) - \mu_n(D)(q\rho_G + (1-q))\right]}. \tag{19}$$

So we have shown that, holding $\sigma_A = \sigma_C = 0$, for any $\sigma_D \in [0, \sigma_{\bar{D}}]$ there is an executive type, which we denote as $\alpha_E(\sigma_D)$, who is indifferent between retaining and replacing the investigator after she drops, given the cutpoints, $\underline{\alpha}^1 = \underline{\alpha}$ and $\bar{\alpha}^1 \in [\bar{\alpha}, 1]$, for first period investigator behavior that is a best response given σ_D. We have also shown that $\alpha_E(0) = \underline{\alpha}$ and $\alpha_E(\sigma_{\bar{D}}) = \underline{\alpha}^{ER}$. Moreover, because $\bar{\alpha}^1$ is a continuous function of σ_D and α_E is a continuous function of $\bar{\alpha}^1$, the composition $\alpha_E(\sigma_D)$ is continuous as well. Thus the intermediate value theorem implies that for each $\alpha_E \in \left(\underline{\alpha}, \underline{\alpha}^{ER}\right)$ there exists some $\sigma_D \in (0, \sigma_{\bar{D}})$ such that there exists an equilibrium as stated in part 1 of Lemma 10.[17]

A similar argument proves part 2 of the lemma. The only complexity is that whereas for $\underline{\alpha}^{ER}$ we only needed to vary σ_D we now need to consider both σ_A and σ_C. What makes this fairly straightforward is the fact that, in contrast to the case of a random replacement, it is possible for an executive with a given α_E to mix both after convictions and after acquittals. The reason for this is that after either a conviction or an acquittal, because $\underline{\alpha}^1 < \underline{\alpha}$ and $\bar{\alpha}^1 = \bar{\alpha}$ the executive's beliefs can be written as a convex combination of

[17] Note that the intermediate value theorem only ensures that for some $\sigma_D \in [0, 1]$ there exists an equilibrium. The strict set inclusion comes from the fact that $\sigma_D = 0$ cannot be an equilibrium for $\alpha_E > \underline{\alpha}$ and $\sigma_D = 1$ cannot be an equilibrium for $\alpha_E < \underline{\alpha}^{ER}$.

(i) a belief that the executive is aggressive and saw $s = NG$ and (ii) a belief that the executive is randomly drawn from $\left[\underline{\alpha}^1, 1\right]$ and saw $s = G$. The only difference is that after convictions and acquittals the executive will put different weights on these two beliefs.

Thus, if after observing a conviction the executive is indifferent between retaining the investigator and replacing her with an investigator who is surely aggressive, he must be indifferent between an aggressive type and a random draw from $\left[\underline{\alpha}^1, 1\right]$. But this in turn means that after an acquittal he must likewise be indifferent about whether to retain the investigator or replace her with an aggressive type. By the same argument, if the executive is indifferent after an acquittal he must be indifferent after a conviction.

Thus we can have σ_C and σ_A both strictly between zero and 1. For any $\alpha_E \in \left(\bar{\alpha}^{ER}, \bar{\alpha}\right)$ there exists a continuum of equilibria, using different mixing probabilities $\sigma_A \in (0,1)$ and $\sigma_C \in (0,1)$, all of which lead to the same investigator behavior, as characterized by $\underline{\alpha}^1$ and $\bar{\alpha}^1$. For simplicity, in the paper we state the equilibrium with $\sigma_A = \sigma_C$.■

Finally, we sketch technical details supporting footnote 16 in the main text, which mentions the counterintuitive fact that an executive who prefers a dogmatic replacement over a random draw may nonetheless prefer to pick a random draw over a dogmatist in the first period. There are two effects to consider: first period policy considerations and selection effects for the second period. The executive types who prefer to do this are PN1 types with α_E close to $\underline{\alpha}^{ER}$ and AN2 types with α_E close to $\bar{\alpha}^{ER}$. Here we consider the case of PN1 types close to $\underline{\alpha}^{ER}$.

Note that given the equilibrium behavior in part 2 of Lemma 10, any executive with $\alpha_E \in \left(\underline{\alpha}, \underline{\alpha}^{ER}\right)$ is indifferent, in terms of selection effects for the second period, between appointing a first-period dogmatist and a first-period random draw.

First-period policy considerations are more subtle. In the absence of accountability incentives, a PN1 type is strictly better off having policies chosen by a dogmatist rather than a random draw. However, the magnitude of this preference is arbitrarily small as $\alpha_E \to \underline{\alpha}^{ER}$. On the flip side, the accountability incentive stemming from the executive's behavior in part 2 of Lemma 10 increases congruence by a first-period random draw. This increases the executive's utility from appointing a random-draw in the first period.

The next step is to show that this utility increase is bounded away from zero. For this step, we need to show that the equilibrium σ_D in part 2 of Lemma 10 does not converge to zero as $\alpha_E \to \bar{\alpha}^{ER}$. To see this, suppose to the contrary that $\sigma_D \approx 0$. Thus accountability incentives have essentially no effect on first-period behavior because $\sigma_A = \sigma_C = 0$, which means that first period investigator behavior is characterized by cutpoints $\underline{\alpha}^1 = \underline{\alpha}$ and $\bar{\alpha}^1 \approx \bar{\alpha}$. This, in turn, implies that an executive with α_E close to $\bar{\alpha}^{ER}$ must strictly prefer to retain the investigator when she drops a case, which is a contradiction with the fact that the executive mixes in this information set.

Because σ_D does not converge to zero, in the equilibrium in part 2 of Lemma 10, $\bar{\alpha}^1 - \bar{\alpha}$ is bounded away from zero as $\alpha_E \to \bar{\alpha}^{ER}$, and thus the magnitude of the accountability-induced increase in the executive's utility from appointing a random-draw in the first period is bounded away from zero.

Thus, there exists some neighborhood of $\underline{\alpha}^{ER}$ such that an PN1 executive within this neighborhood would choose random draw over a dogmatist in the first period if (contrary to the assumptions of our model) he were allowed to make that choice.