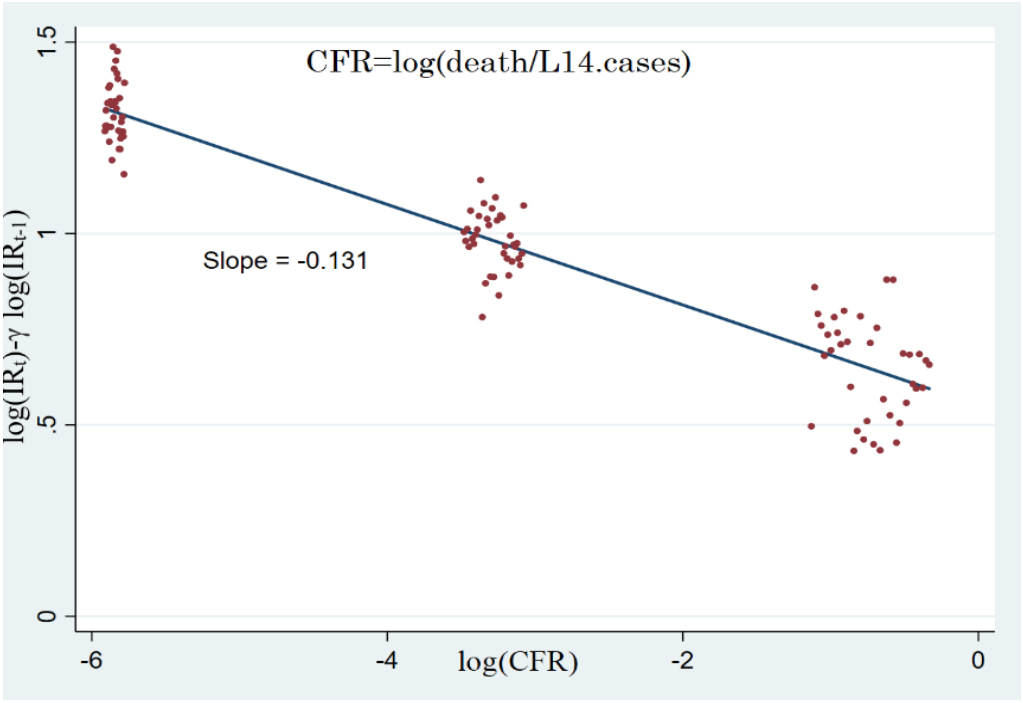
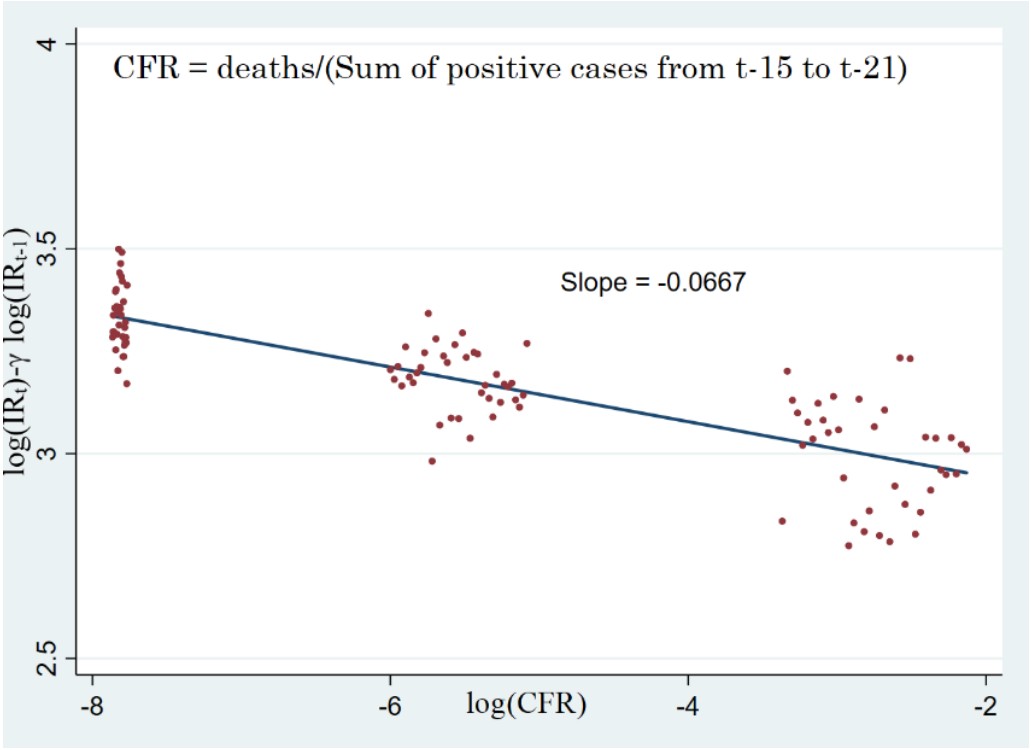
# Suggested Online Appendix for "Strategically Rational Risk Taking by Age in COVID-19, and the Heterogeneous Agent Behavioral SIR Model"

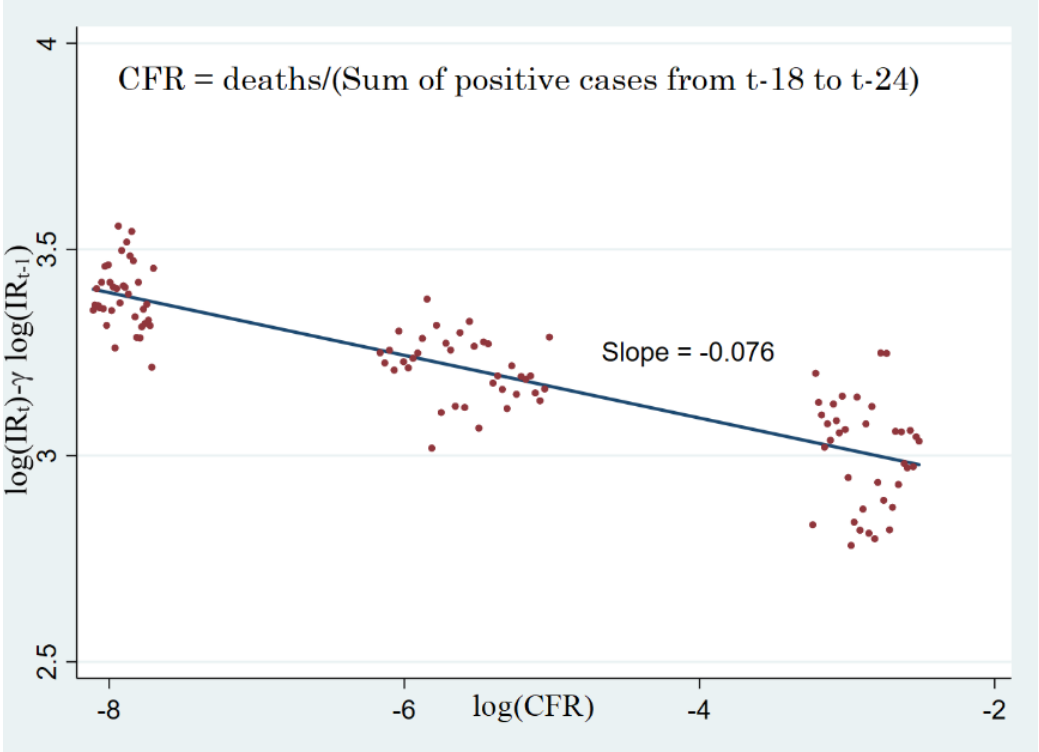
| CFR Proxy | log(death/lagged cases) | | Day: t-15 to t-21 | | Day: t-18 to t-24 | | Day: t-11 to t-17 | |
|---|---|---|---|---|---|---|---|---|
| | Entire Sample | Not first 6 wks | Entire Sample | Not first 6 wks | Entire Sample | Not first 6 wks | Entire Sample | Not first 6 wks |
| $\gamma$ | -0.131 | -0.124 | -0.067 | 0.070 | -0.076 | -0.081 | -0.090 | -0.087 |
| $P(H_0: \gamma \geq 0)$ | 0.078 | 0.134 | 0.073 | 0.104 | 0.073 | 0.102 | 0.076 | 0.125 |
| incidence-prevalence elasticity $\varphi$ | 0.850 | 0.837 | 0.861 | 0.842 | 0.863 | 0.842 | 0.853 | 0.838 |
| $P\left(H_0: -\gamma \geq (1-\varphi)\right)$ | 0.393 | 0.298 | 0.067 | 0.041 | 0.113 | 0.072 | 0.130 | 0.080 |
| $P\left(H_0: -\gamma \leq {}^1/_2 (1-\varphi)\right)$ | 0.228 | 0.309 | 0.526 | 0.582 | 0.433 | 0.476 | 0.376 | 0.454 |
| Number of Observations | 111 | 96 | 111 | 96 | 111 | 96 | 111 | 96 |
| Adjusted $R^2$ | 0.987 | 0.986 | 0.987 | 0.986 | 0.987 | 0.986 | 0.987 | 0.986 |

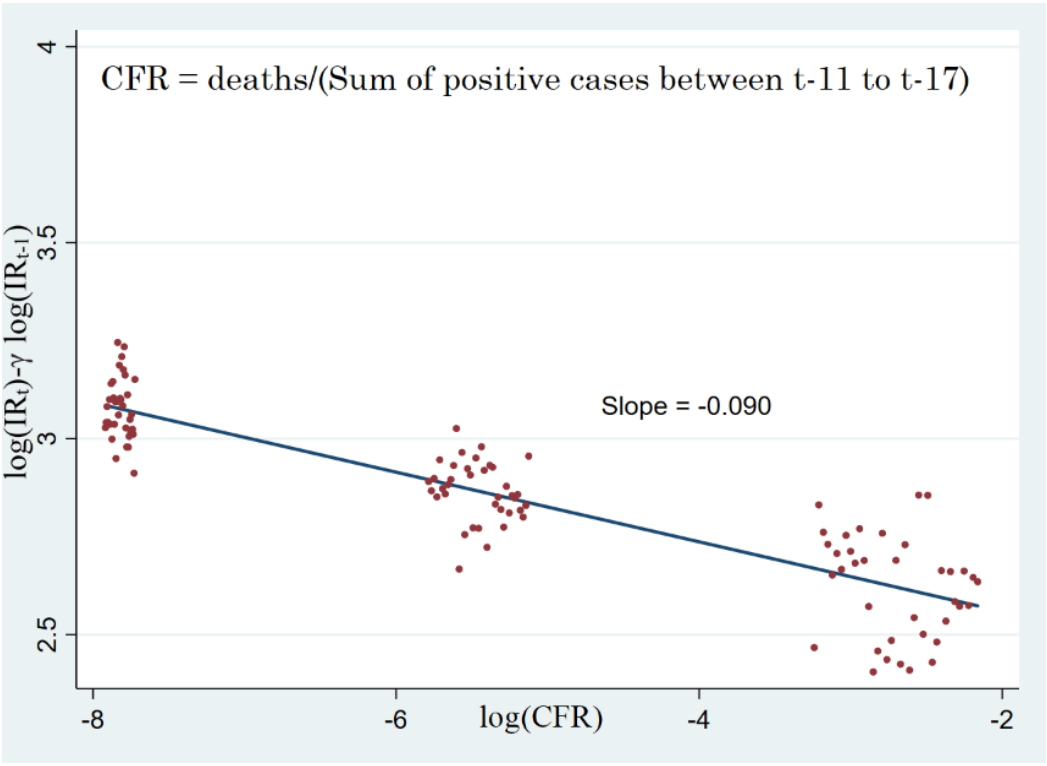
In this table, we use daily data to compute CFR. In the first panel, we divide the number of deaths reported in each day for each group by the number of positive cases for that group reported 14 days earlier. In the next three panels, for each day *t* in our sample we divide the number of reported deaths for each age group by the sum of the positive cases over the *t-k* to *t-m*, where $k<m$. In the next step, we take the weekly average of these daily case fatality rate measures across each age group. For instance, in the last panel, we divide the number of deaths for each age group by the sum of the positive cases between t-11 and t-17, which is centered on two weeks (t-14) prior to the time to die (t). We then take the weekly average of this measure for each age group and use that in our regressions whose results are reported in the last panel. Overall, this table shows our results are insensitive to how we compute CFR. The main findings and the conclusions remain the same.

Below, we provide the scatter plot for regressions residuals not explained by the last period infection rate, or the age or time fixed effects on the CFR for each of the panels above.


CFR=log(death/L14.cases)
Slope = -0.131
log(IR$_t$)-γ log(IR$_{t-1}$)
log(CFR)
0
.5
1
1.5
-6
-4
-2
0


CFR = deaths/(Sum of positive cases from t-15 to t-21)
Slope = -0.0667
log(IR$_t$)-γ log(IR$_{t-1}$)
log(CFR)
2.5
3
3.5
4
-8
-6
-4
-2


CFR = deaths/(Sum of positive cases from t-18 to t-24)
Slope = -0.076
log(IR$_t$)-γ log(IR$_{t-1}$)
log(CFR)
4
3.5
3
2.5
-8
-6
-4
-2


CFR = deaths/(Sum of positive cases between t-11 to t-17)
Slope = -0.090
log(IR$_t$)-γ log(IR$_{t-1}$)
log(CFR)
4
3.5
3
2.5
-8
-6
-4
-2