“Measuring the Effect of the Zero Lower Bound on Medium- and Longer-Term Interest Rates”

Online Appendix

Eric T. Swanson and John C. Williams

Our baseline nonlinear least squares specifications (9) and (10) impose the restriction that only the overall sensitivity $\delta_{t}$ of the given bond yield varies over time, while the relative sensitivities $\beta$ of that yield to different types of macroeconomic announcements is constant over time. According to the specification test in Table 2, the data is very consistent with that restriction. Nevertheless, as a robustness check, we have also run regression (9)--(10) with smaller, more homogeneous sets of announcements $X_t$.

Figure A1, below, reports results using specification (9)--(10) with the set of macroeconomic announcements $X_t$ restricted to just Nonfarm Payrolls. The format of Figure A1 is the same as for Figure 3 in the main paper. Figure A2 reports analogous results where the set of announcements $X_t$ contains just the Initial Claims, Nonfarm Payrolls, and Unemployment Rate announcements.

The results in these figures are essentially the same as in Figure 3 in the main paper, which uses all of the macroeconomic announcements listed in Table 2. The main difference in Figures A1 and A2 is that the standard errors are larger: the $\pm 2$-standard-error bands are wider, and the volatility of the blue line (the point estimates) over time is larger. This was the main reason we used multiple macroeconomic announcements for our baseline analysis in the paper rather than just a single announcement or a narrower set of announcements. Even in Figure A2, which includes the weekly Initial Claims releases, the standard errors are substantially greater than in Figure 3 in the paper, which includes eight additional major monthly economic announcements plus the quarterly GDP release.
Figure A1. Time-varying sensitivity coefficients $\delta^\tau$ from regression (10) applied to Nonfarm Payrolls announcements for (a) 3-month, (b) 6-month, (c) 1-year, (d) 2-year, (e) 5-year, and (f) 10-year Treasury yields. See notes to Figure 3 for details.
Figure A2. Time-varying sensitivity coefficients $\delta^\tau$ from regression (10) applied to Initial Claims, Non-farm Payrolls, and Unemployment Rate announcements for (a) 3-month, (b) 6-month, (c) 1-year, (d) 2-year, (e) 5-year, and (f) 10-year Treasury yields. See notes to Figure 3 for details.