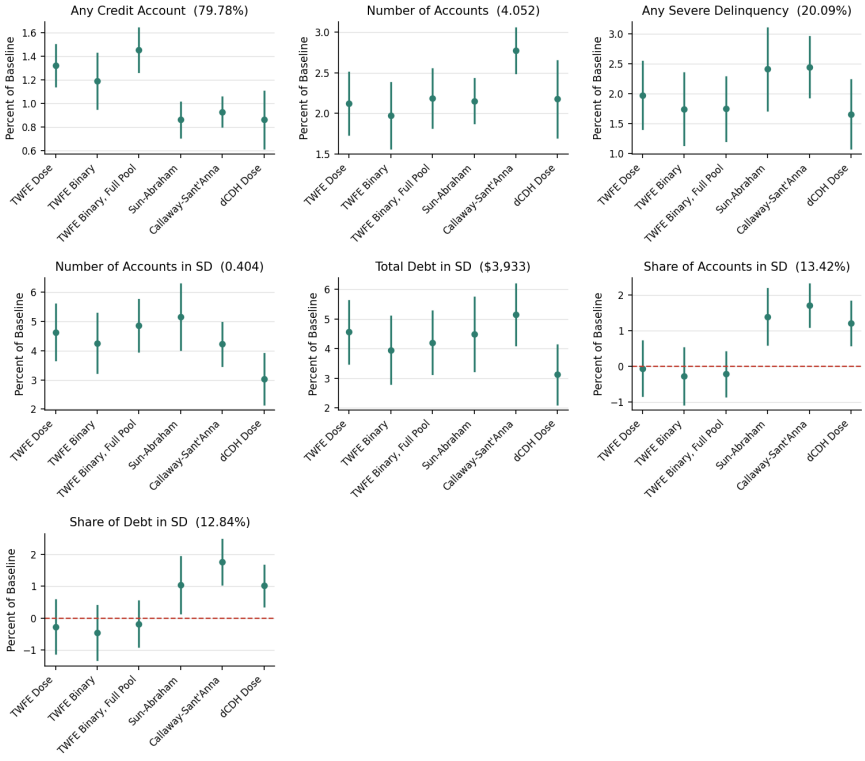
Online Appendix

to "Free School Meals and Financial Health"

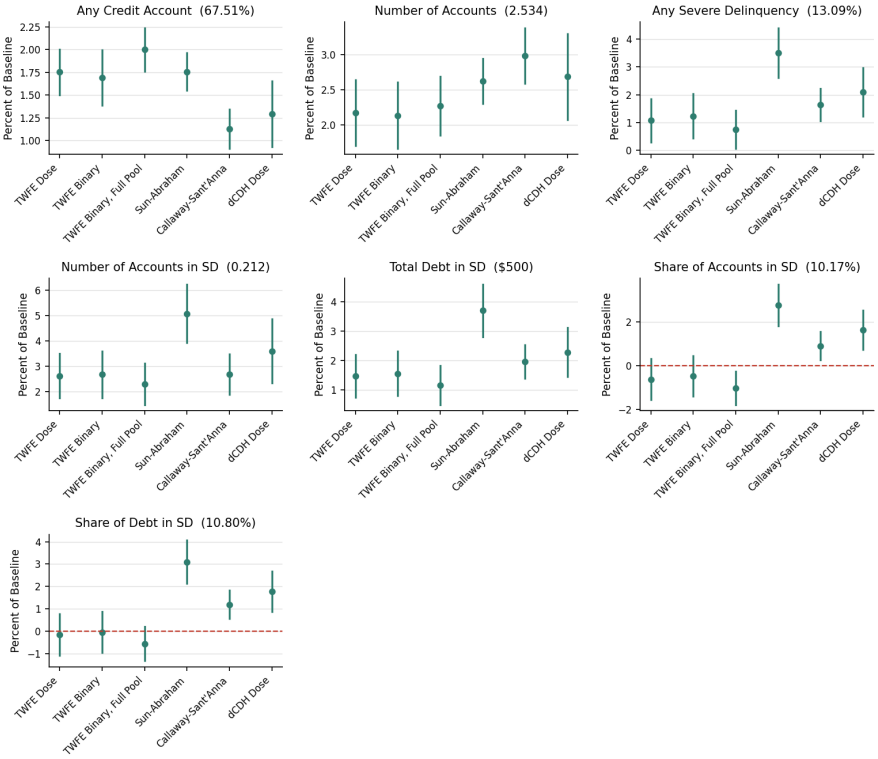
Orgul Ozturk
and
M. Melinda Pitts

Figure OA1. Estimator Comparison

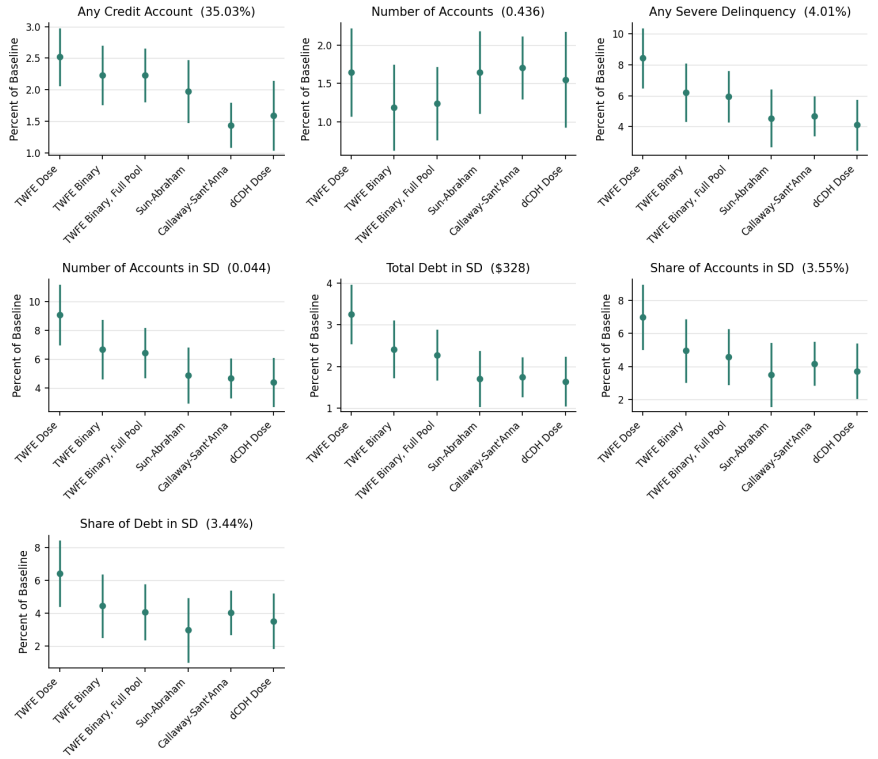
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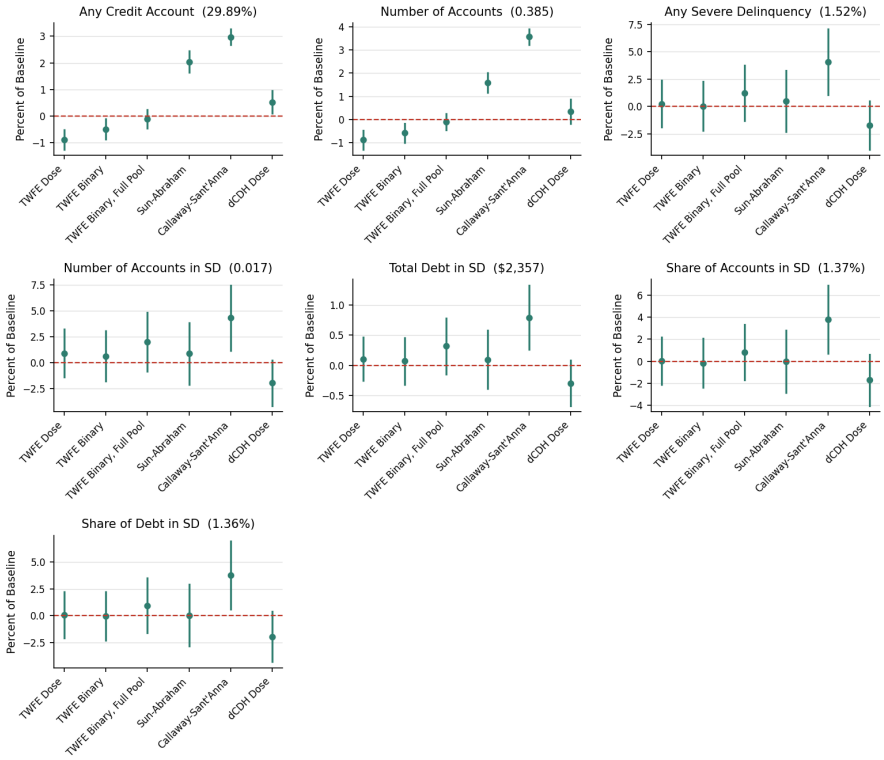
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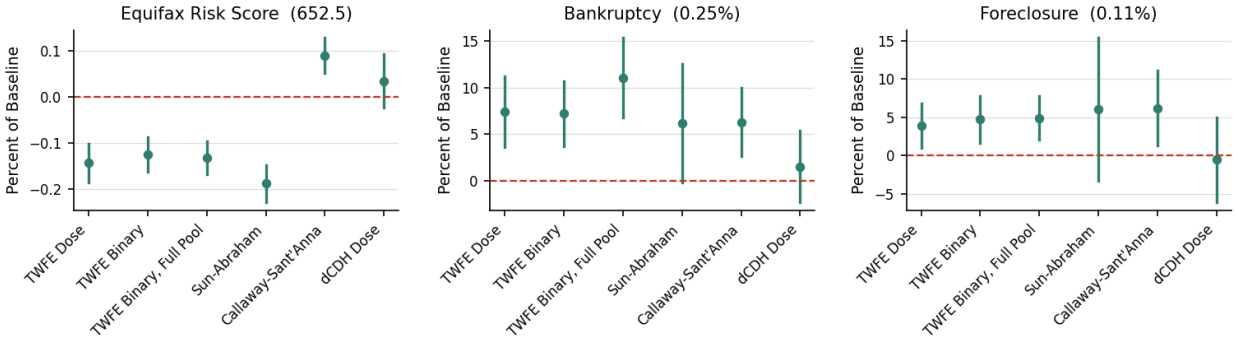
c. Auto



d. Mortgage



e. Creditworthiness and Catastrophic Events

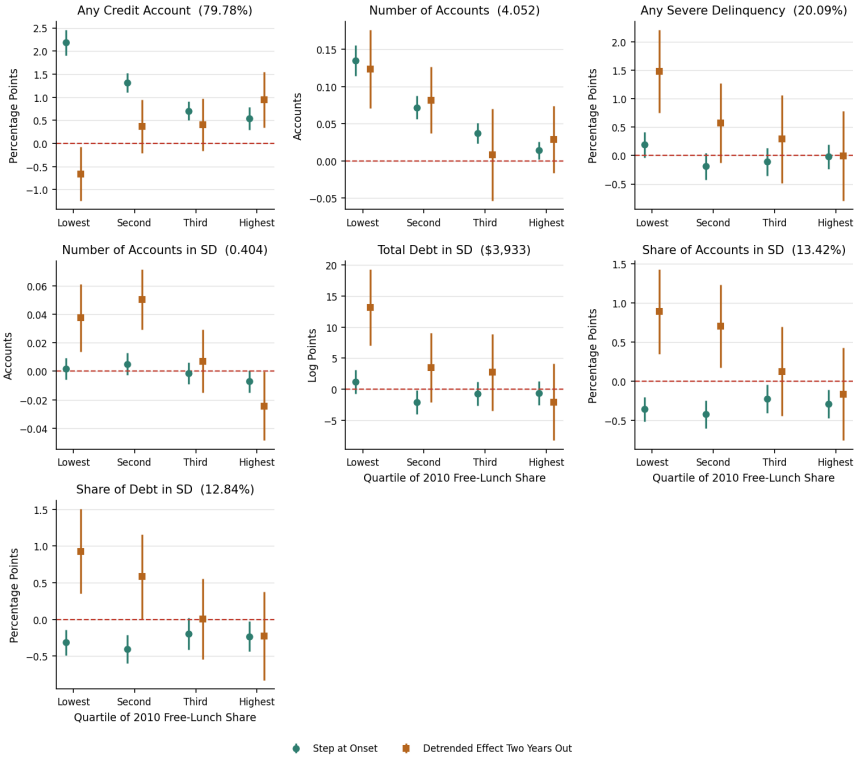


Notes. Each panel reports the same outcome estimated six ways, expressed as a percentage of that outcome's own pre-treatment baseline with 95 percent confidence intervals. TWFE dose is the combined marginal effect at realized exposure; TWFE binary replaces the dose with an absorbing indicator; the full pool row returns the ten pilot states and the District of Columbia to the sample. Sun-Abraham is estimated at the person level, Callaway-Sant'Anna and de Chaisemartin-D'Haultfœuille on tract-quarter means weighted by person count. The dCDH figure is the mean of its horizon effects over horizons one through eight, with a delta-method standard error from its own covariance matrix. Log-dollar outcomes are converted as exp(b) − 1. Each panel carries its own vertical scale and the zero line is shown only where a confidence interval crosses it. The six outcomes in Figure 4 are repeated here for completeness.

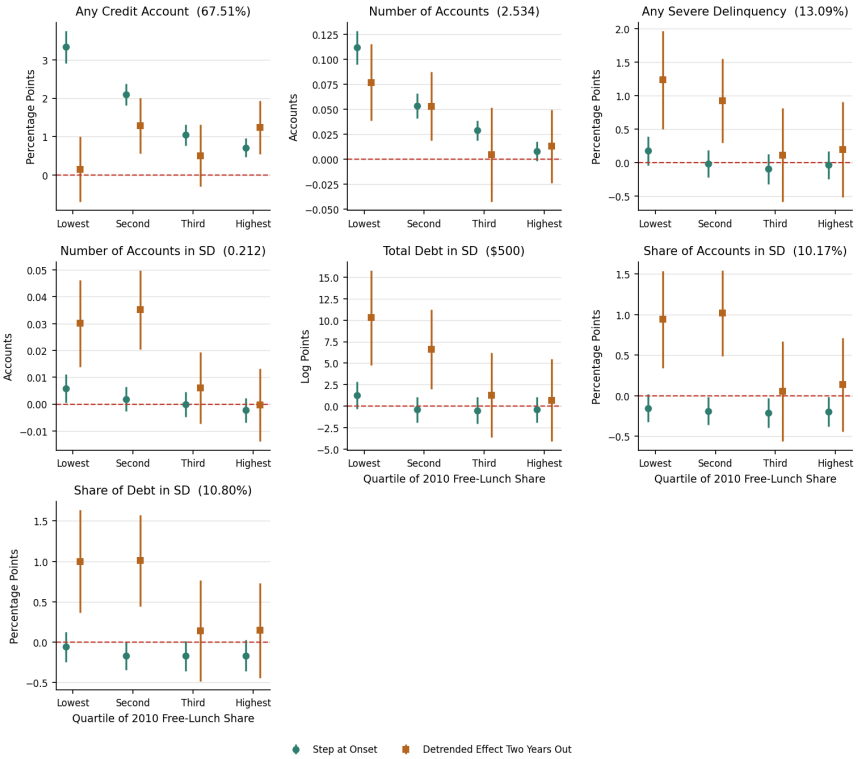
Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022).

Figure OA2. Step at Onset and Detrended Effect by Prior Eligibility, All Outcomes

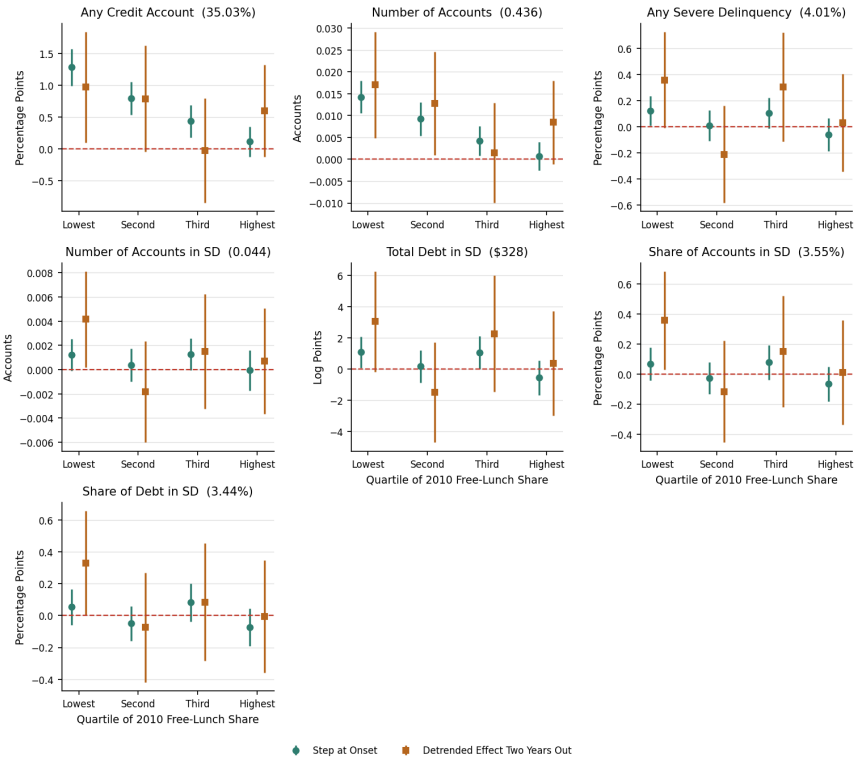
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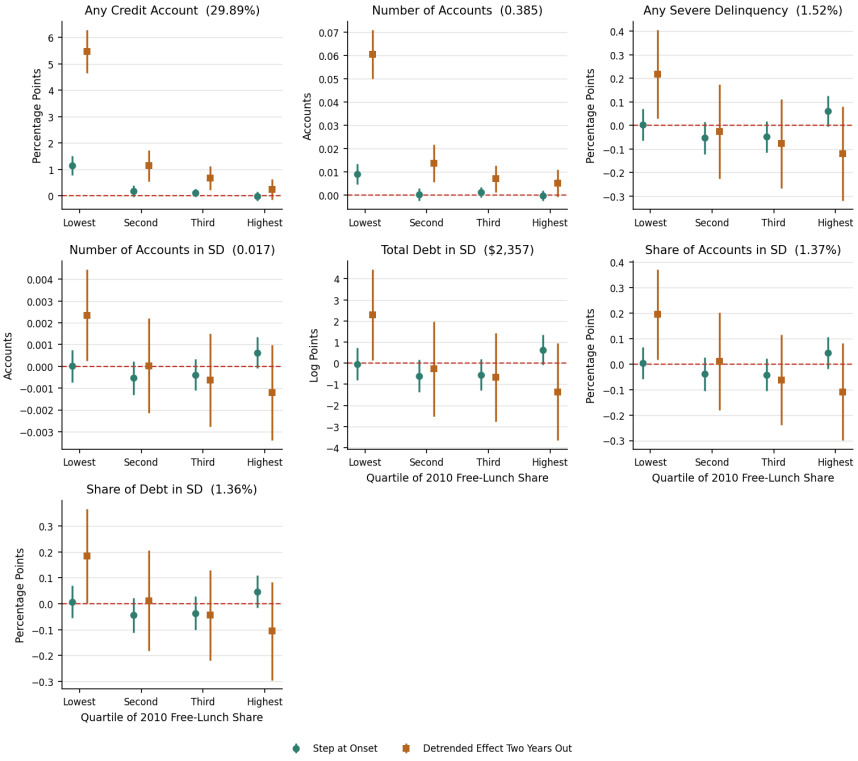
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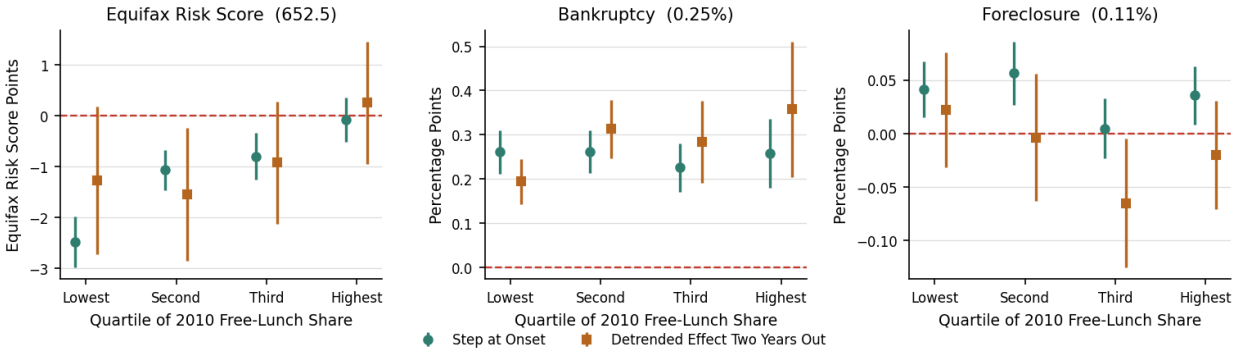
c. Auto



d. Mortgage



e. Creditworthiness and Catastrophic Events

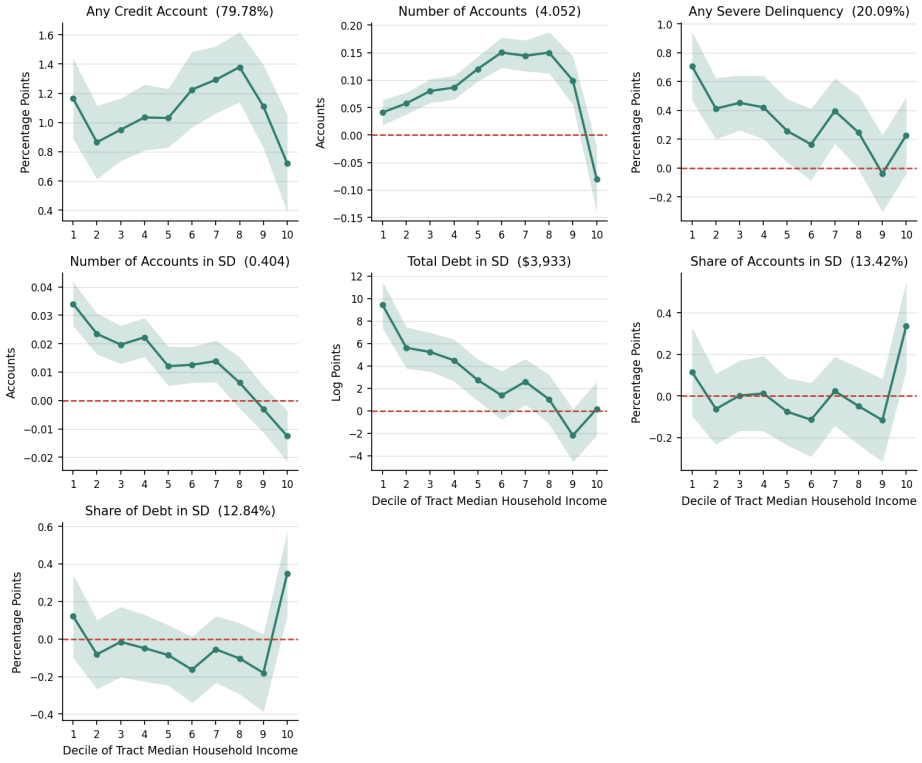


Notes. Event studies estimated separately for ever-CEP individuals in each quartile of their tract's 2010 free-and-reduced-price share. The step at onset is the change from two quarters before onset to the onset quarter, and the detrended effect is the effect two years after onset net of each quartile's pre-onset slope carried forward. Bars are 95 percent confidence intervals, in each outcome's own units; bankruptcy and foreclosure are in percentage points. The figure in parentheses after each panel title is the pre-treatment baseline.

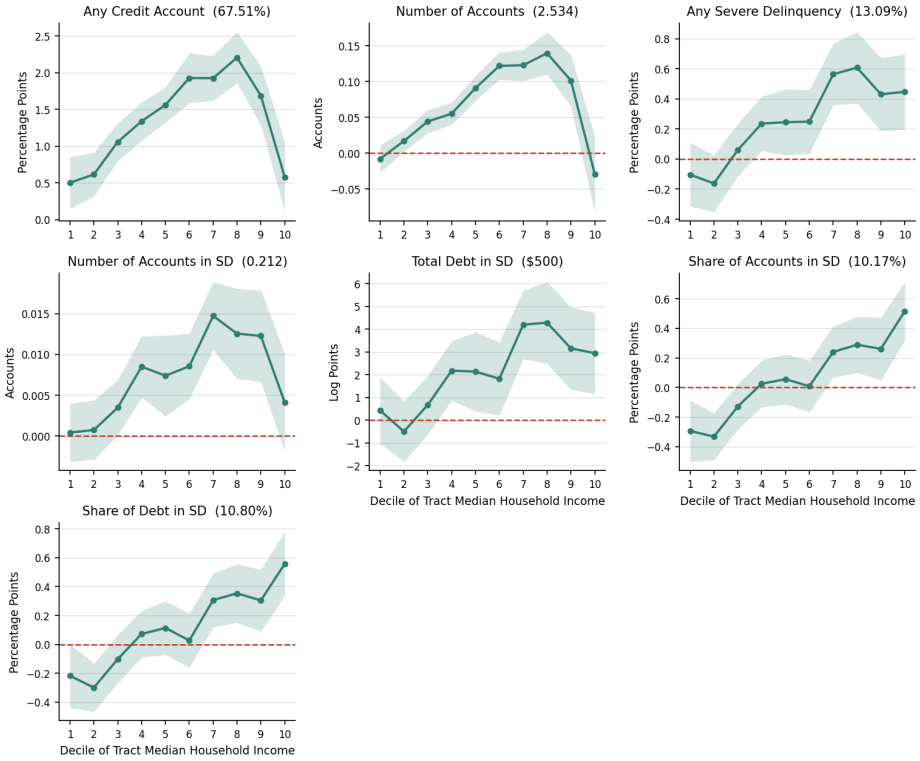
Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022); 2010 free-and-reduced-price shares from the National Center for Education Statistics Common Core of Data, via Ruffini (2022).

Figure OA3. Tract Income Heterogeneity

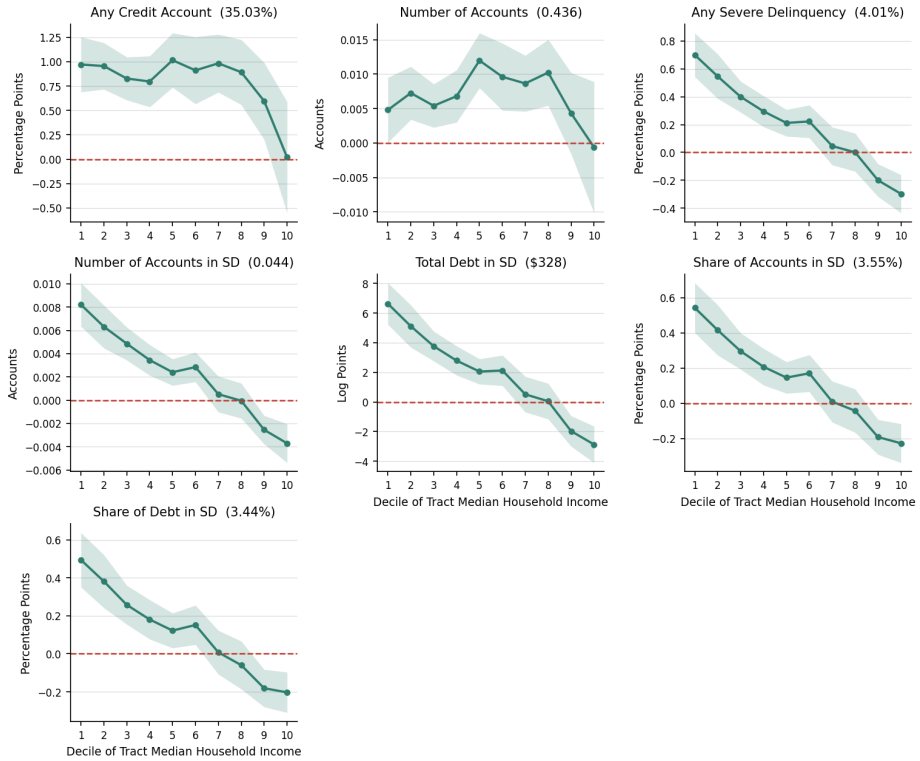
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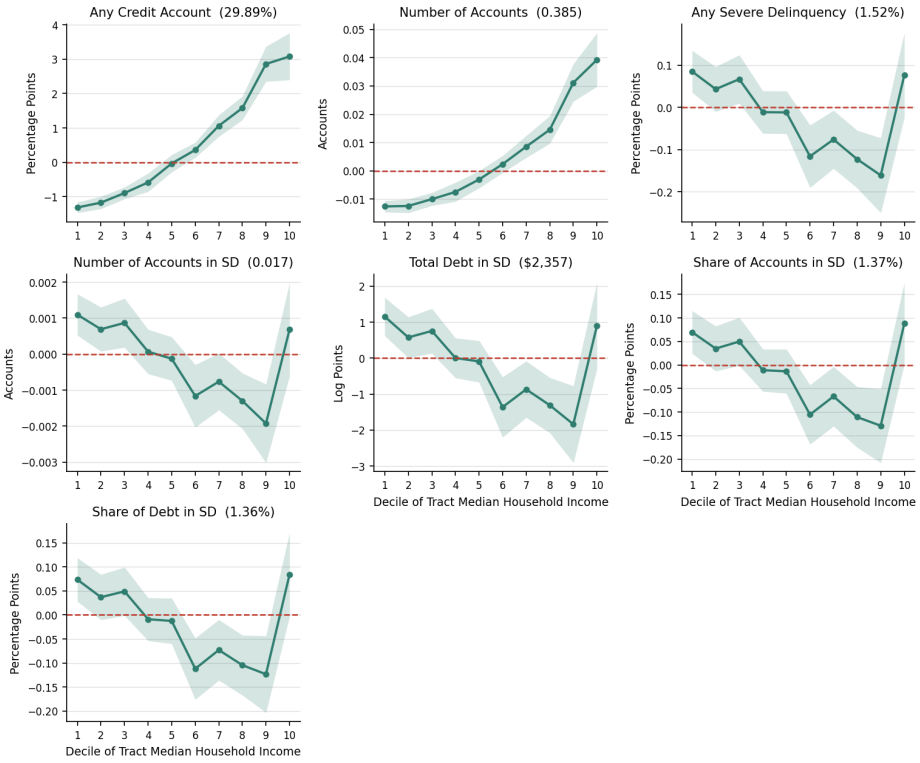
b. Revolving



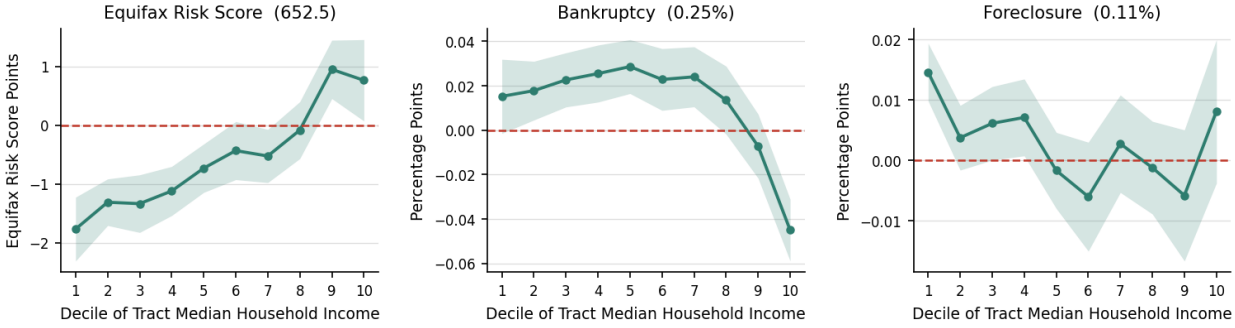
c. Auto



d. Mortgage



e. Creditworthiness and Catastrophic Events

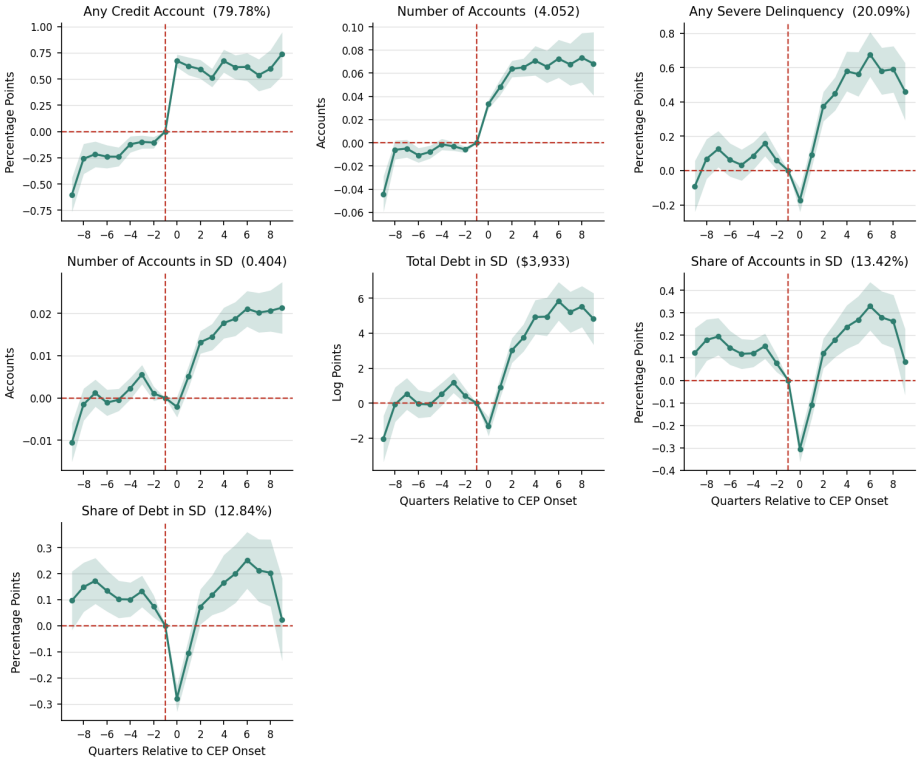


Notes. Combined marginal effect at realized exposure within each decile of tract median household income, with 95 percent confidence intervals shaded. Standard errors are exact, computed from the covariance between the two interacted dose coefficients within each decile. Deciles are computed once from the American Community Survey 2013–2017 five-year estimates and held fixed across the panel. Each vertical axis carries the outcome's own units and the figure in parentheses after each panel title is its pre-treatment baseline. The horizontal zero line is shown only where a confidence interval crosses it.

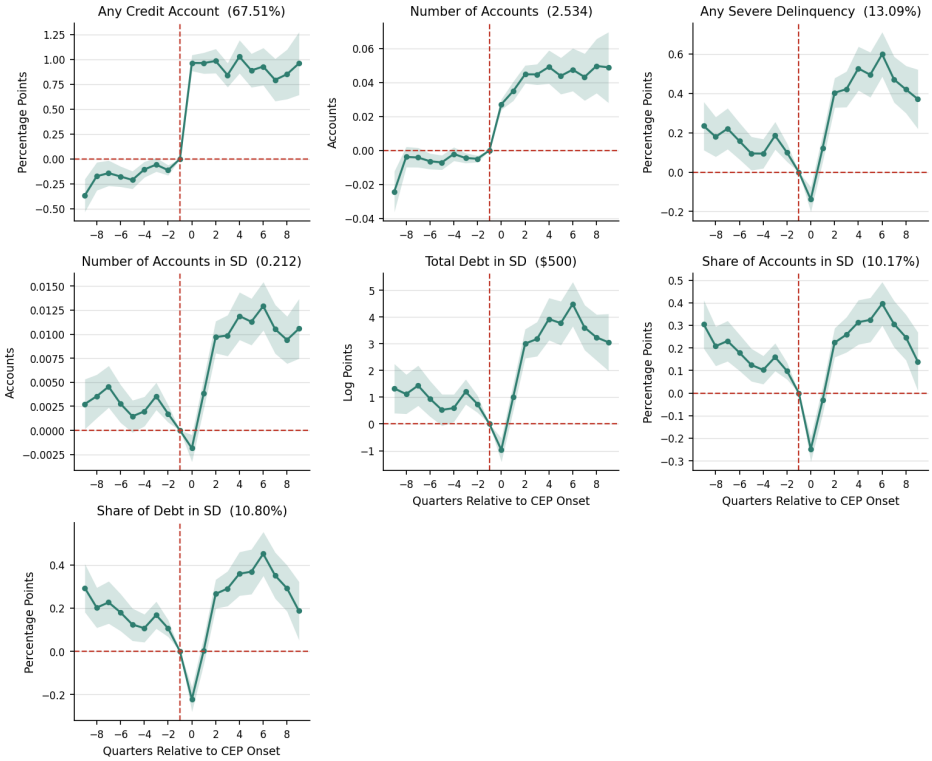
Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022); tract median household income from the American Community Survey 2013–2017 five-year estimates (U.S. Census Bureau), accessed through IPUMS NHGIS.

Figure OA4. Binary Event Study

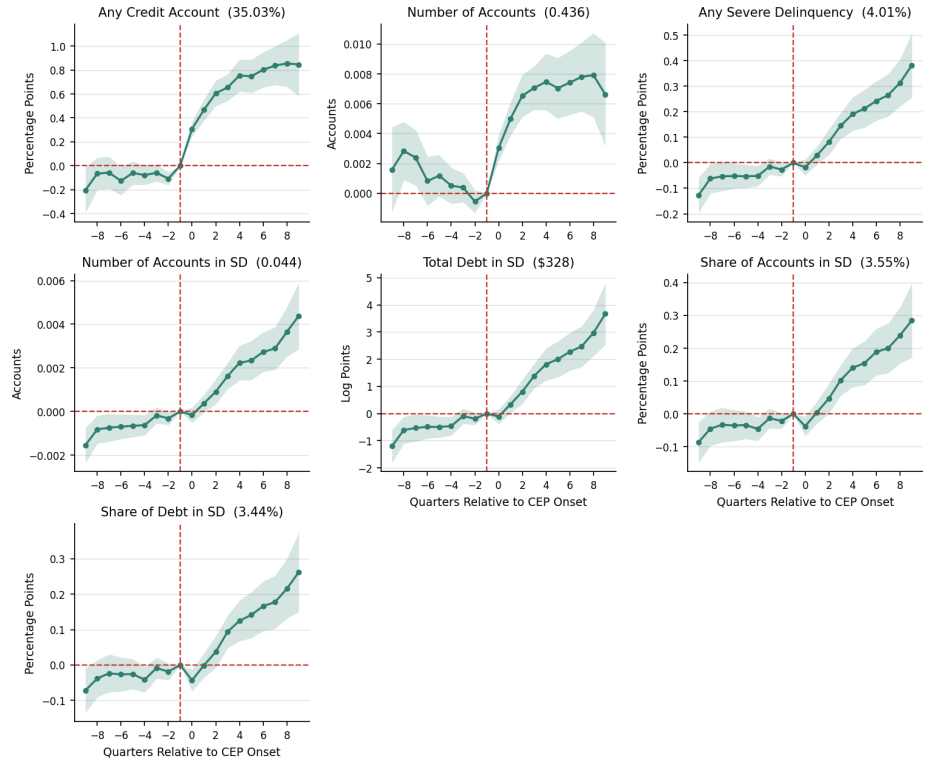
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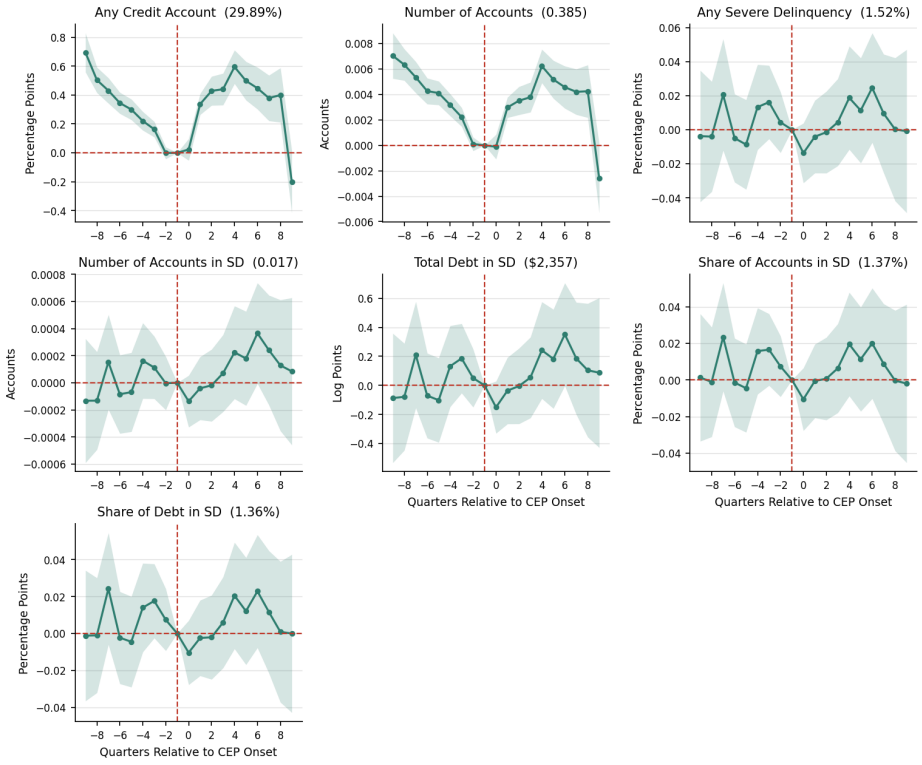
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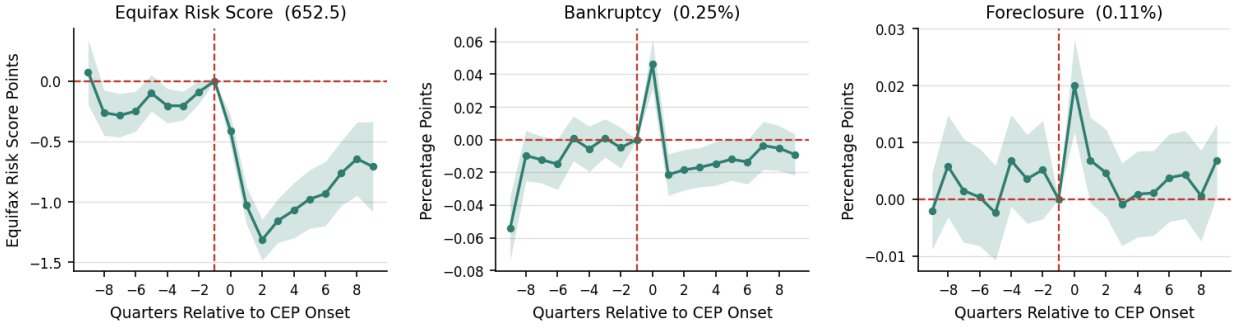
c. Auto



d. Mortgage



e. Creditworthiness and Catastrophic Events

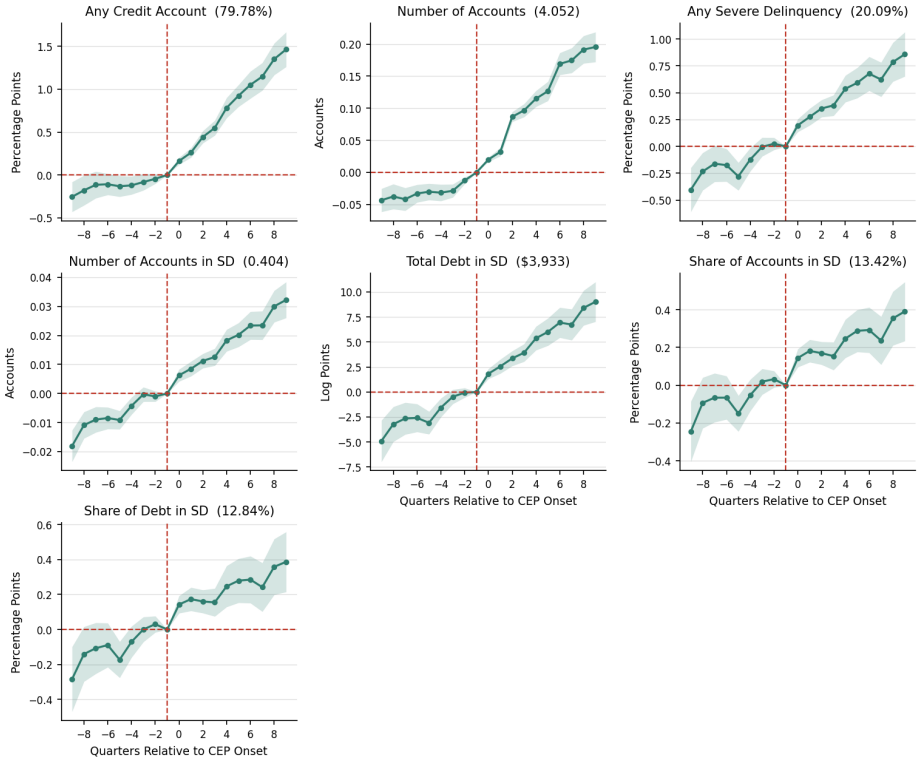


Notes. Event-study coefficients from the two-way fixed effects specification with an absorbing binary treatment in place of the continuous dose, with 95 percent confidence intervals shaded. The vertical dashed line marks the omitted reference quarter and event time is binned at the end points, nine quarters before and after onset. Estimated at the person level with person and state-by-quarter fixed effects, standard errors clustered on county.

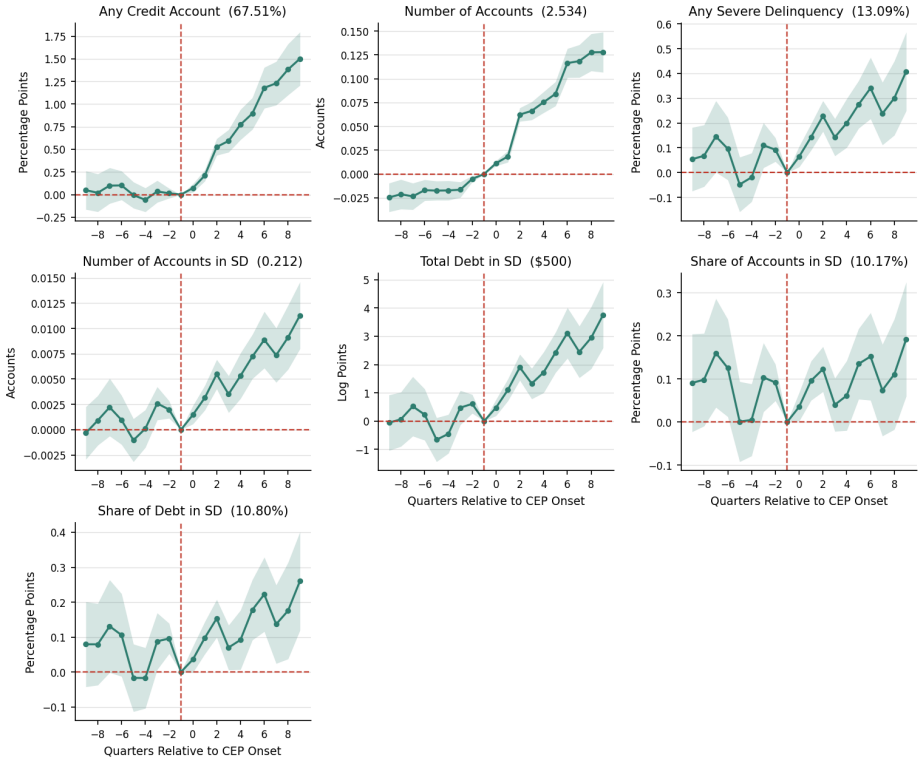
Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022).

Figure OA5. Callaway-Sant'Anna Event Study

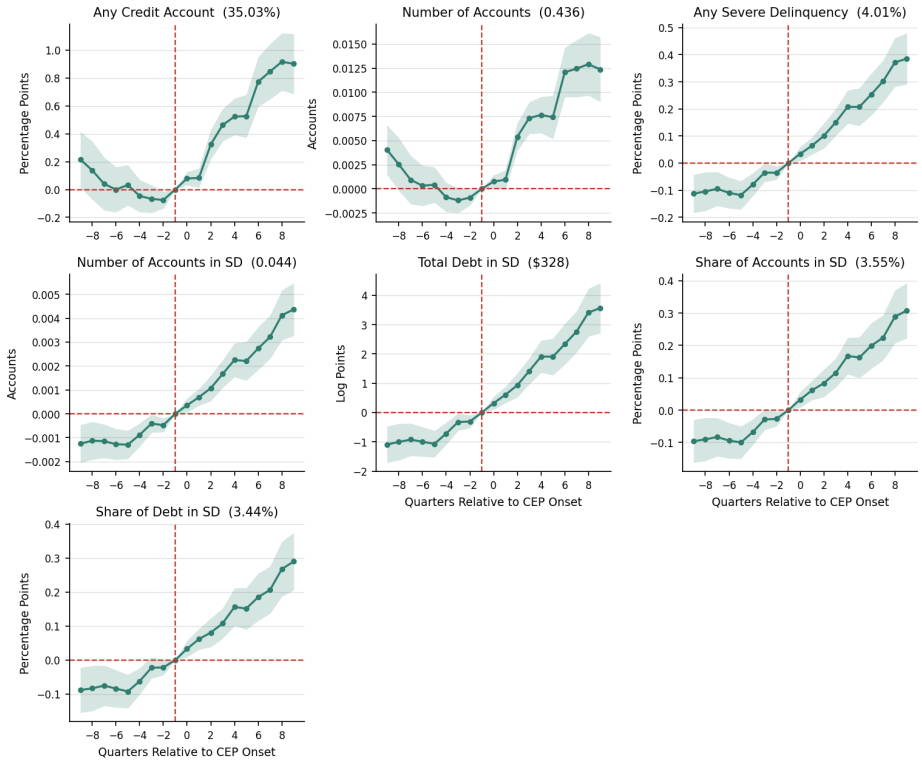
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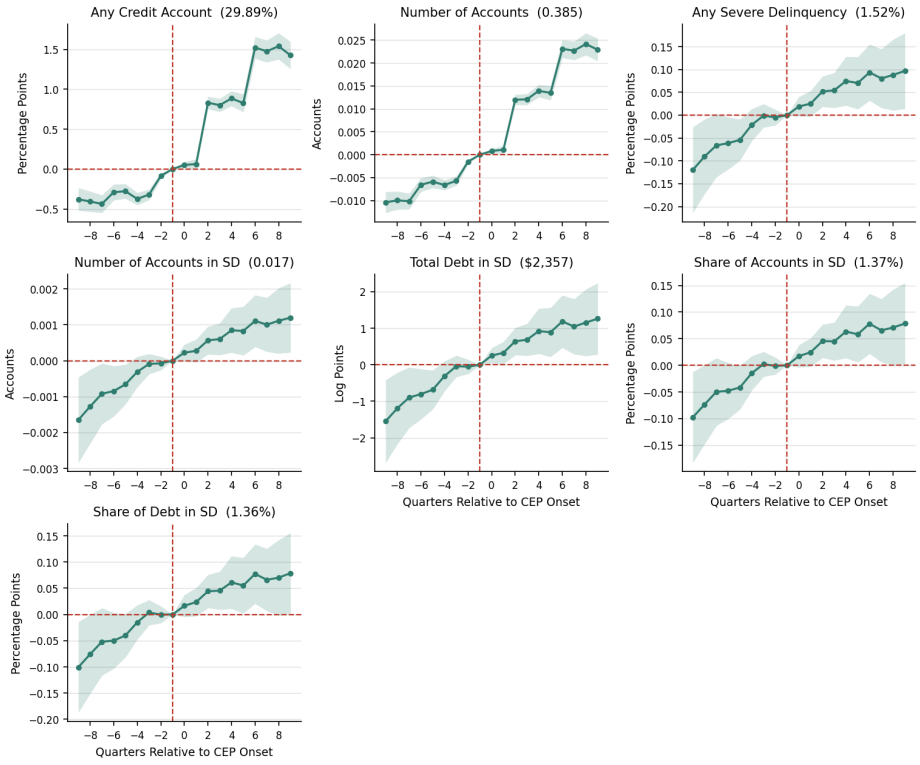
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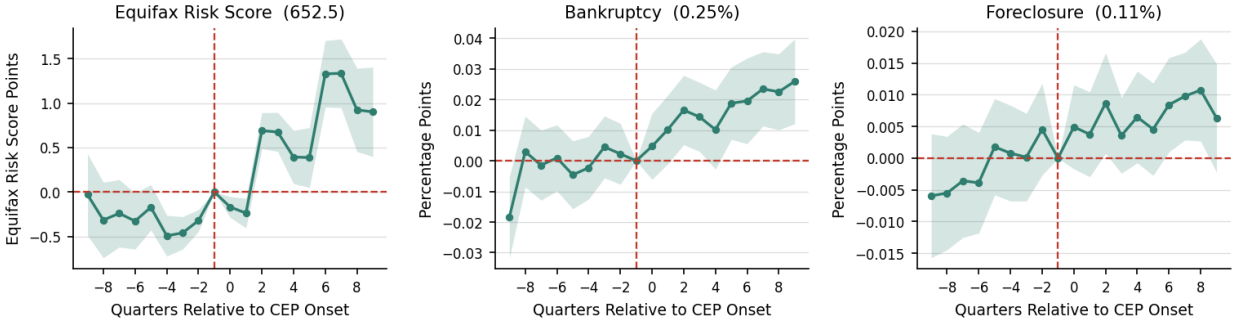
c. Auto



d. Mortgage



e. Creditworthiness and Catastrophic Events

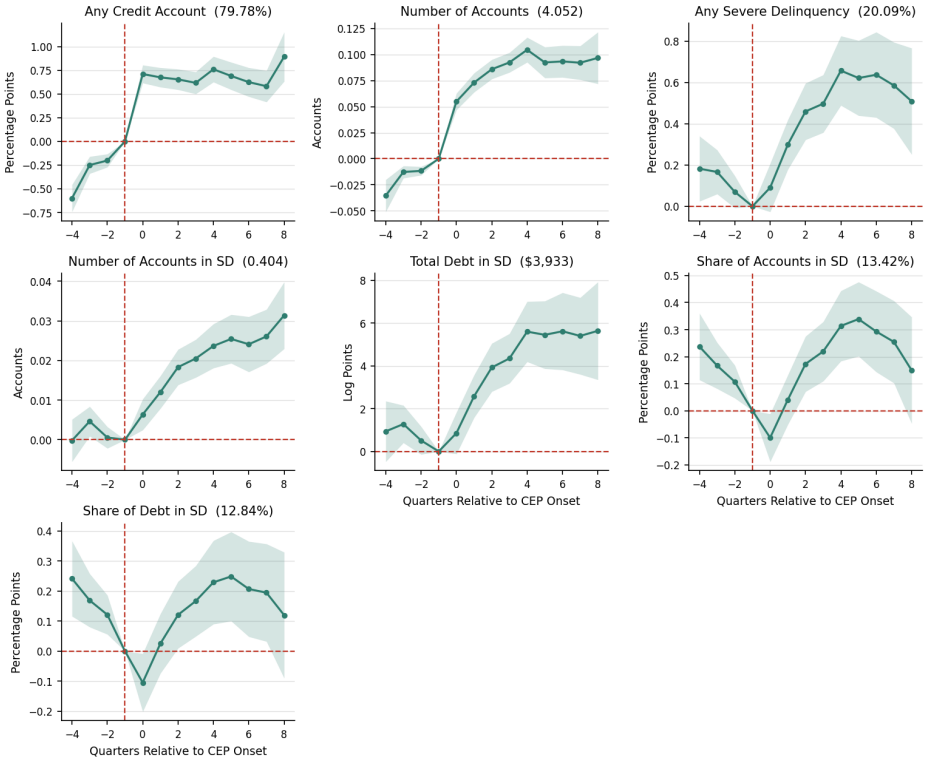


Notes. Group-time average treatment effects aggregated by event time, with 95 percent confidence intervals shaded. Estimated on tract-quarter means weighted by person count, with coefficients placed on the universal base period, which normalizes the quarter before onset to zero. The vertical dashed line marks that reference quarter.

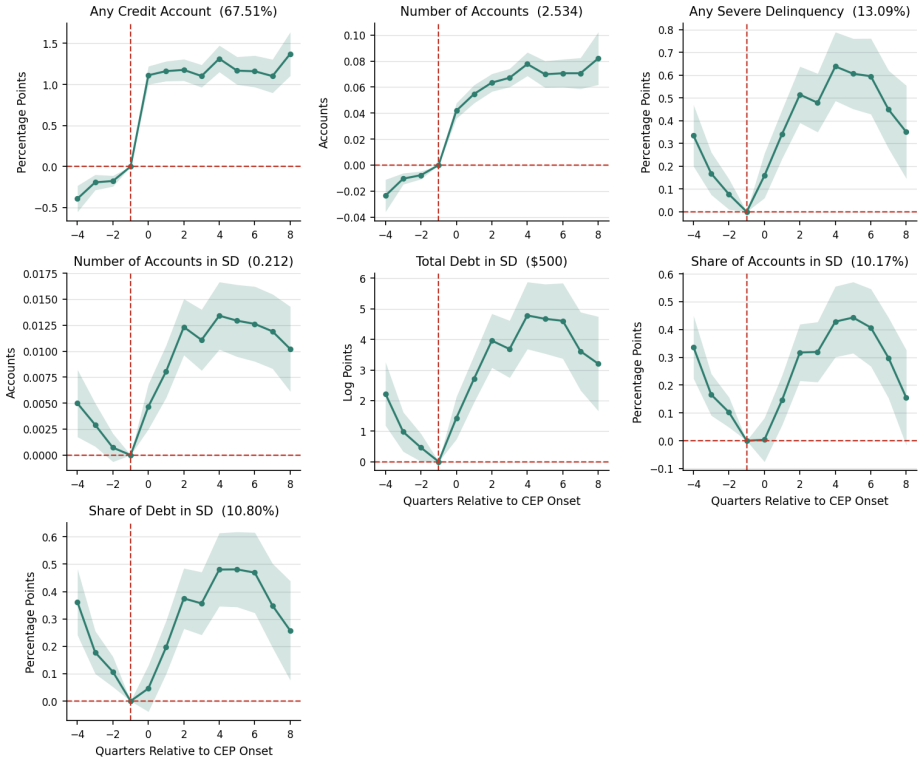
Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022).

Figure OA6. Sun-Abraham Event Study

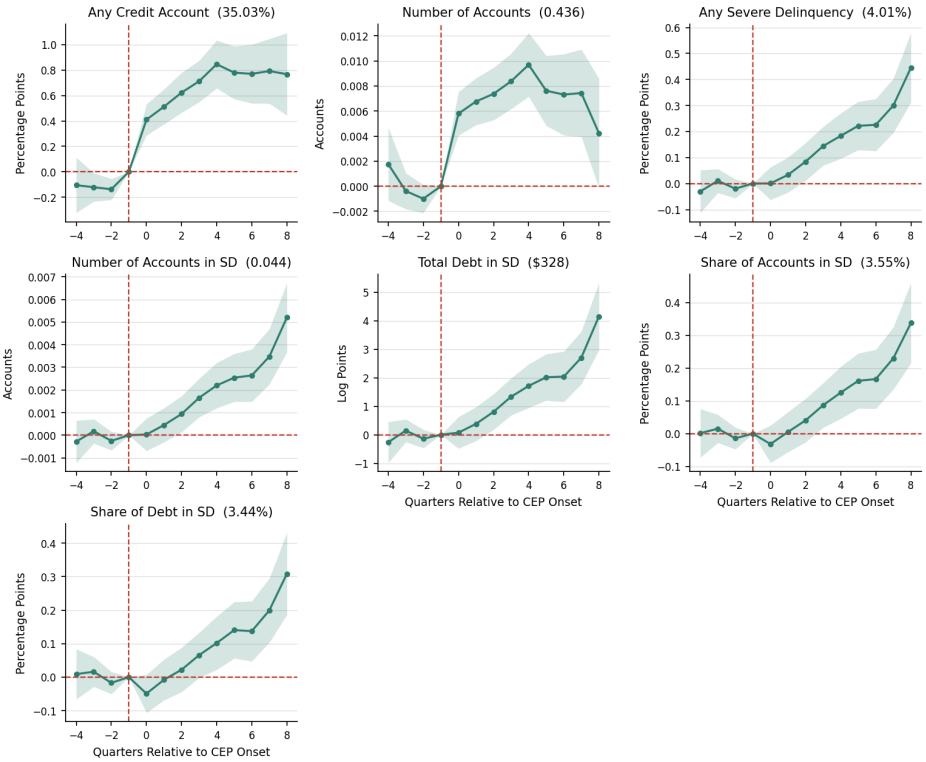
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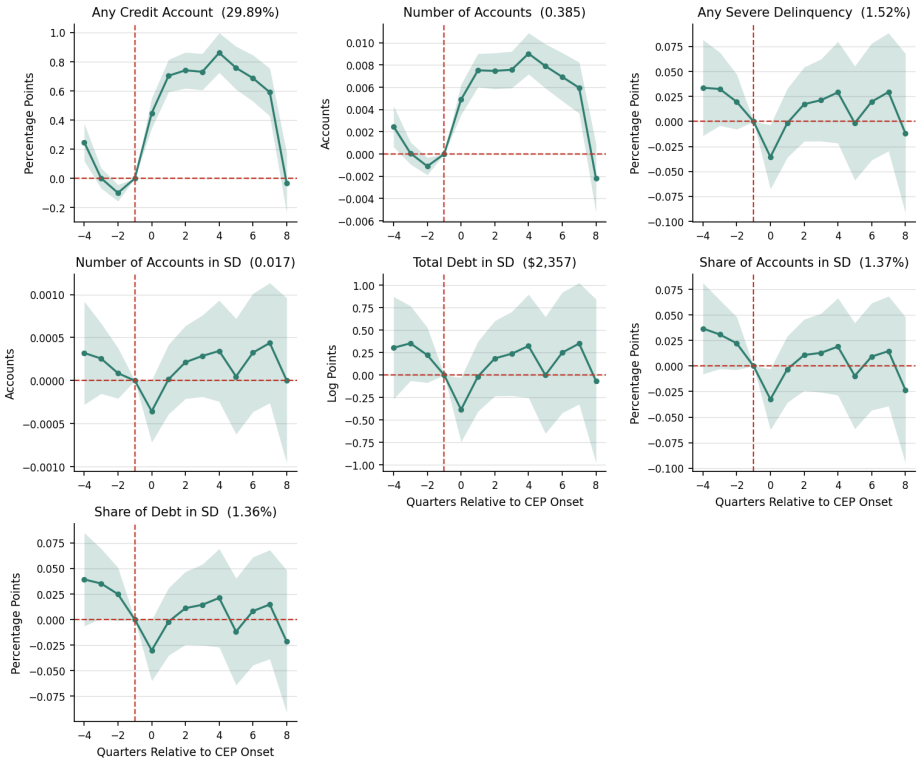
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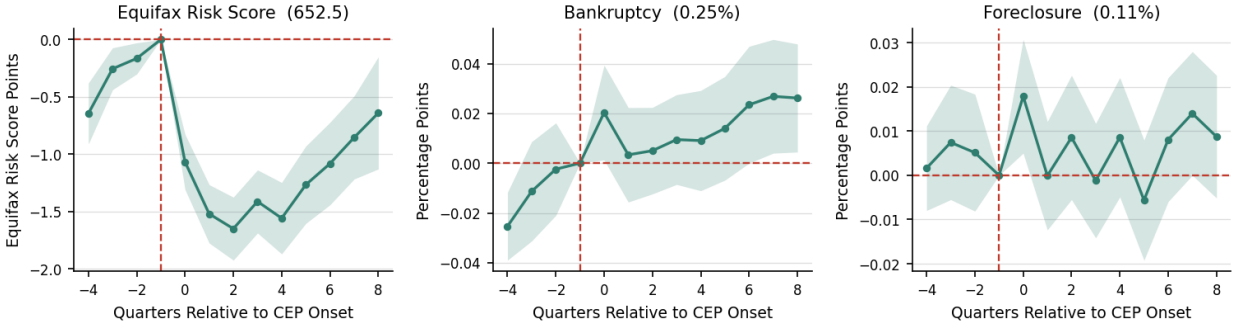
c. Auto



d. Mortgage



e. Creditworthiness and Catastrophic Events

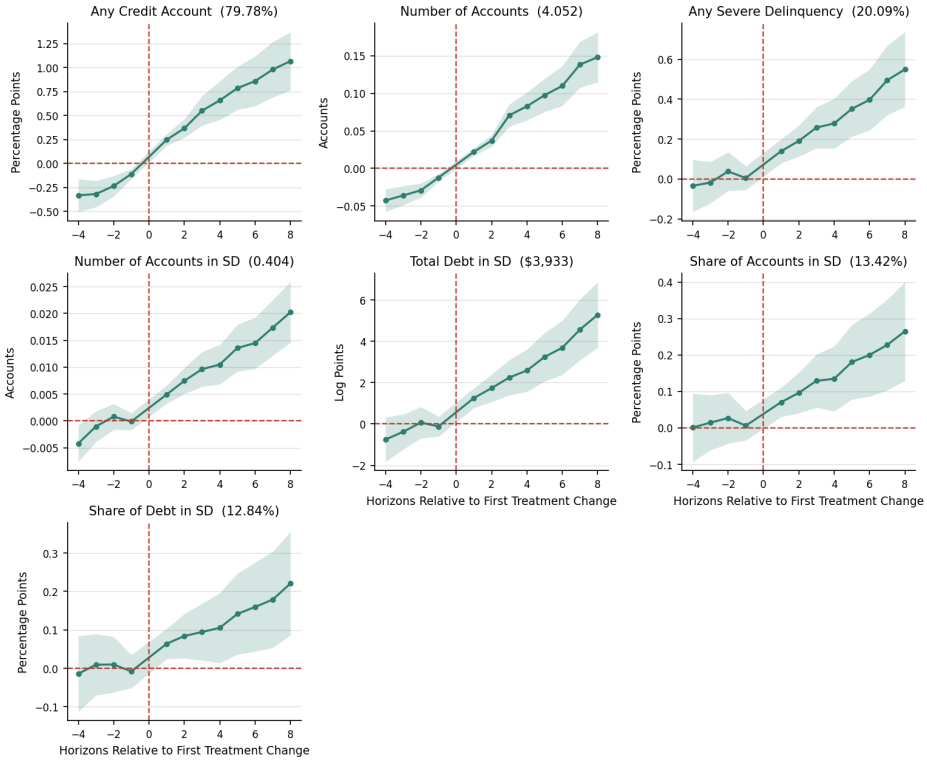


Notes. Interaction-weighted event-study coefficients, with 95 percent confidence intervals shaded. Estimated at the person level on a cell-stratified draw of 22,475,942 person-quarters, 38.7 percent of the main estimation sample, with person and state-by-quarter fixed effects and standard errors clustered on county. The vertical dashed line marks the omitted reference quarter. Event time is binned at the end points, nine quarters before and after onset, so the first and last points pool every earlier and later quarter.

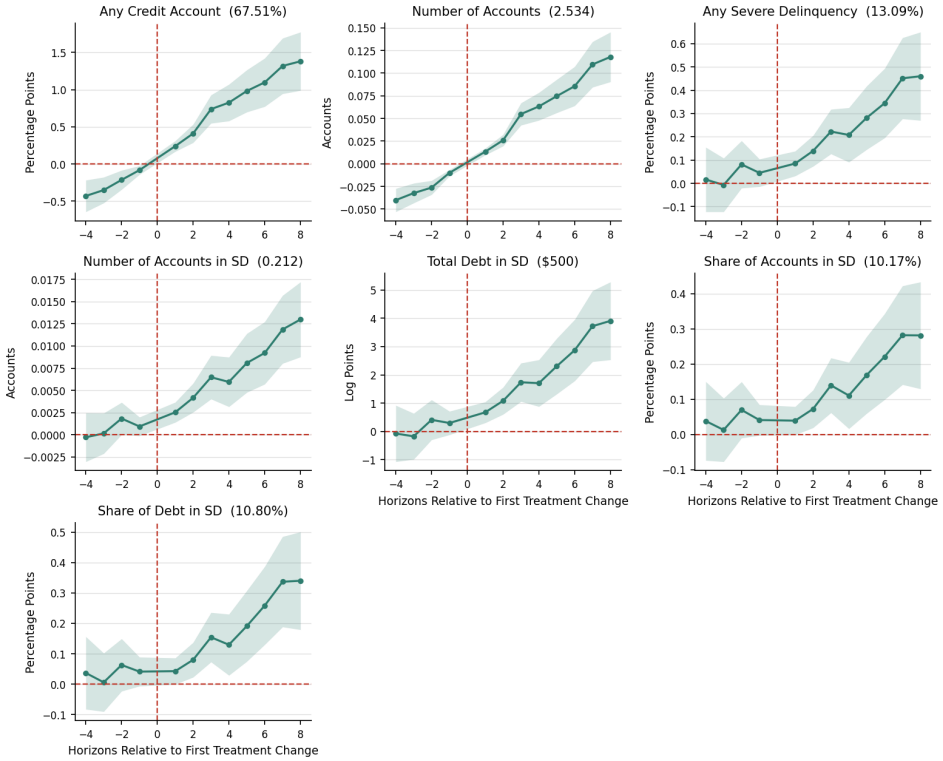
Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022).

Figure OA7. de Chaisemartin-D'Haultfœuille Event Study

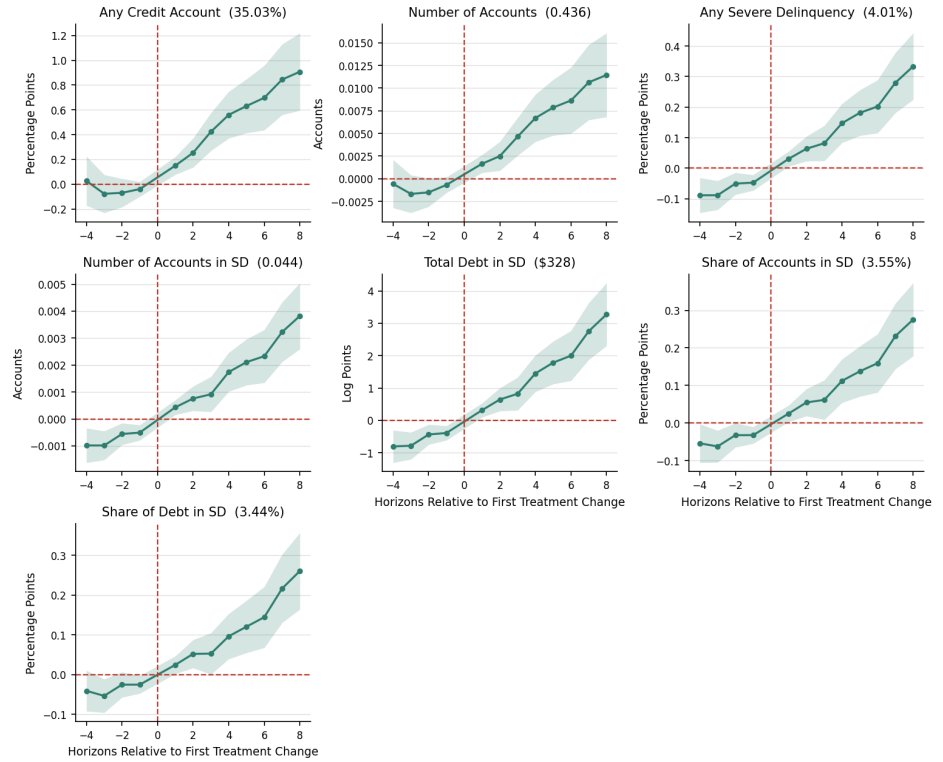
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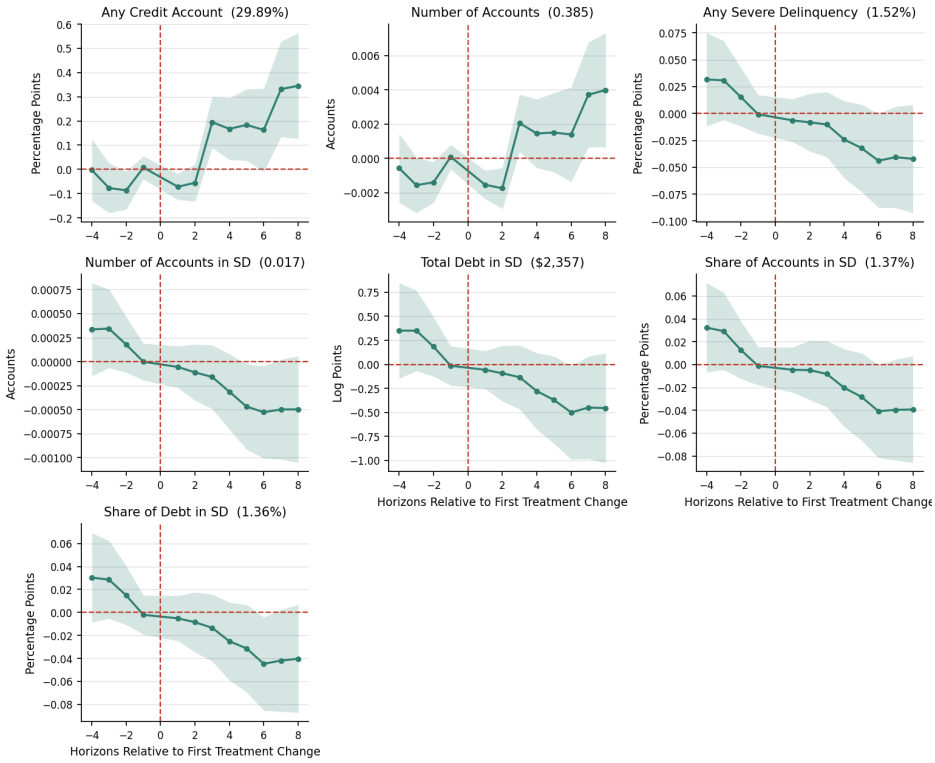
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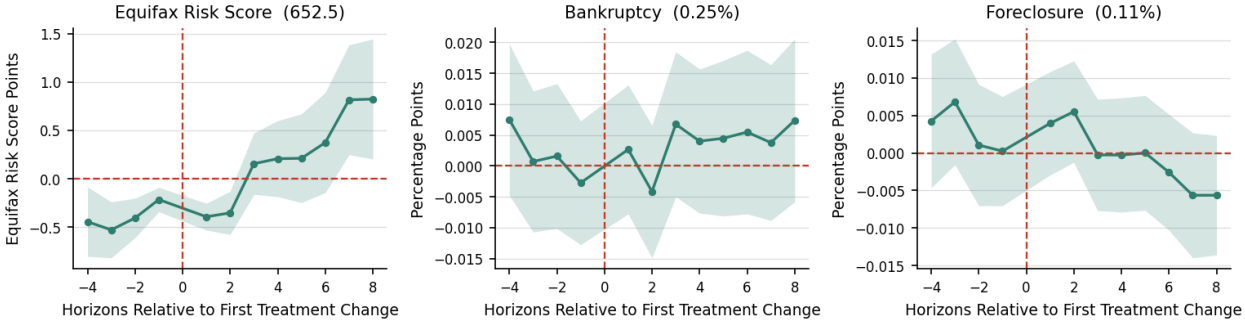
c. Auto



d. Mortgage



e. Creditworthiness and Catastrophic Events

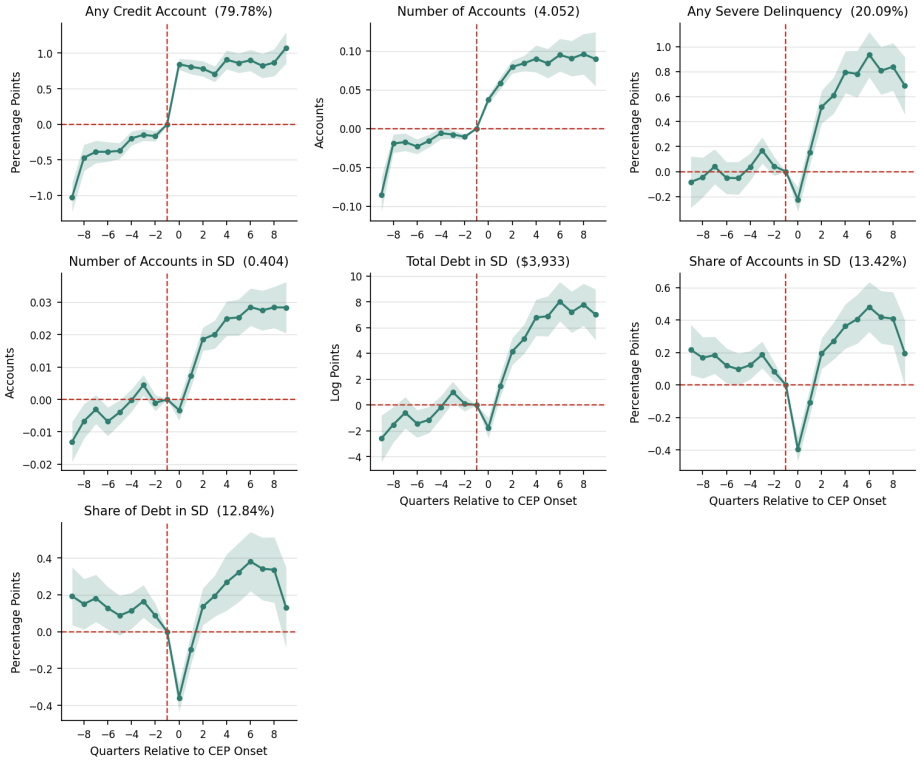


Notes. Dynamic effects at horizons one through eight with placebo estimators at the corresponding negative horizons, and 95 percent confidence intervals shaded. The vertical dashed line marks the first treatment change rather than an omitted period, so there is no horizon zero. Estimated on tract-quarter means weighted by person count, with the comparison group restricted to tracts uncovered throughout.

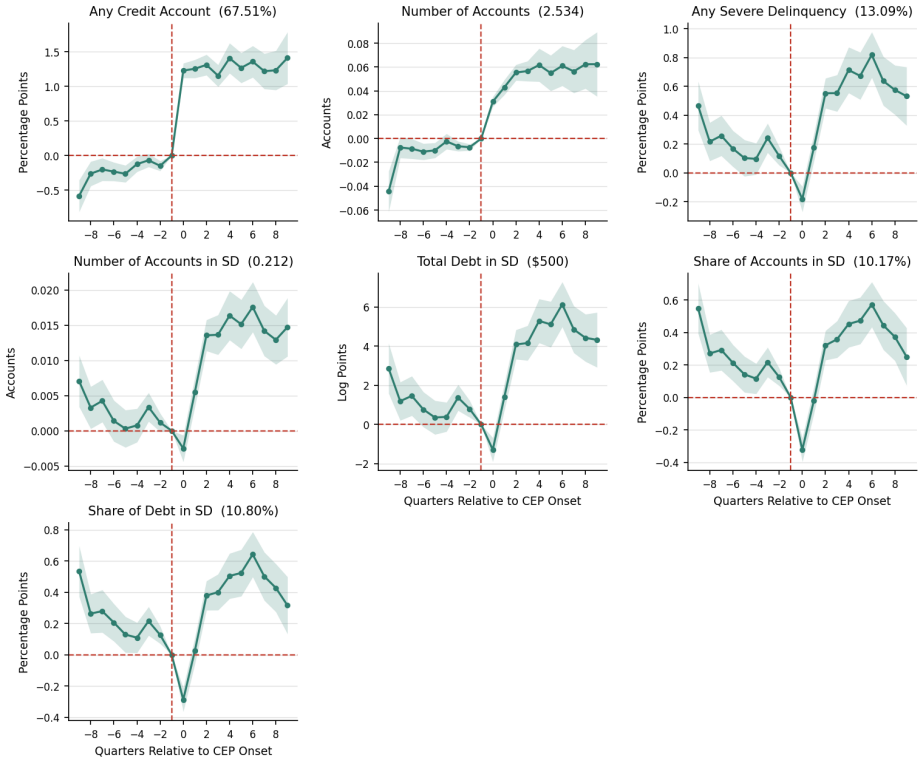
Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022).

Figure OA8. Event Study

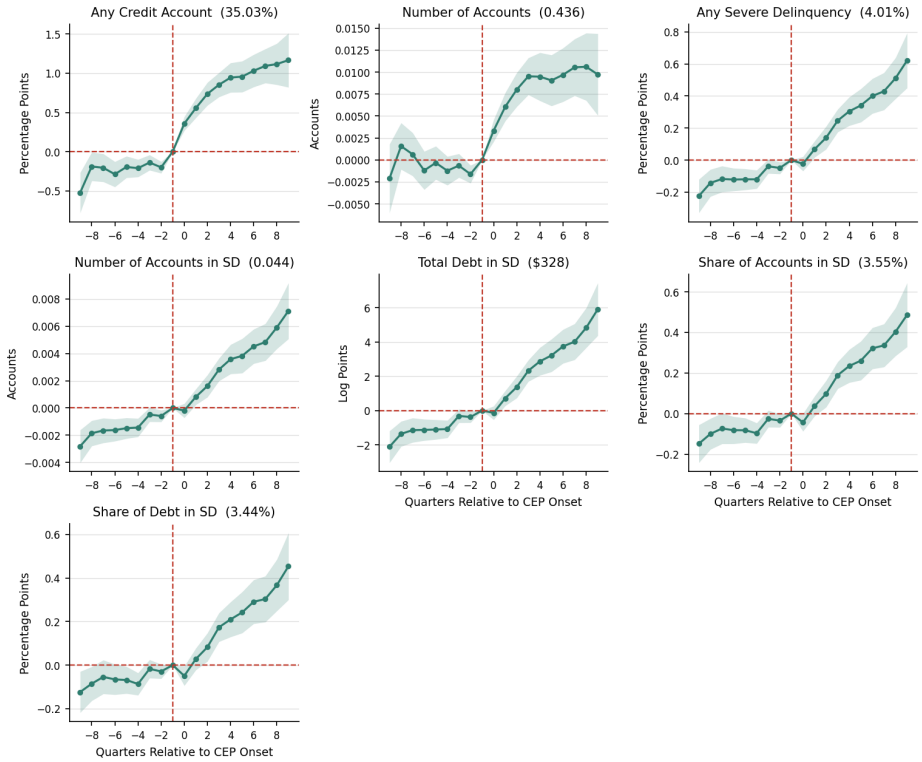
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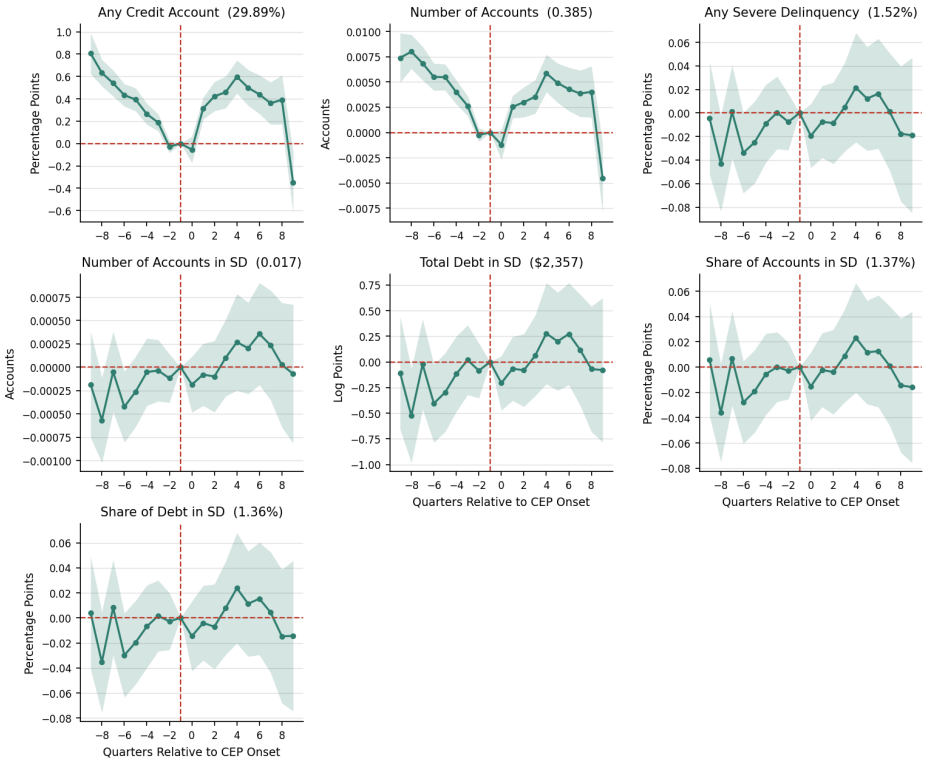
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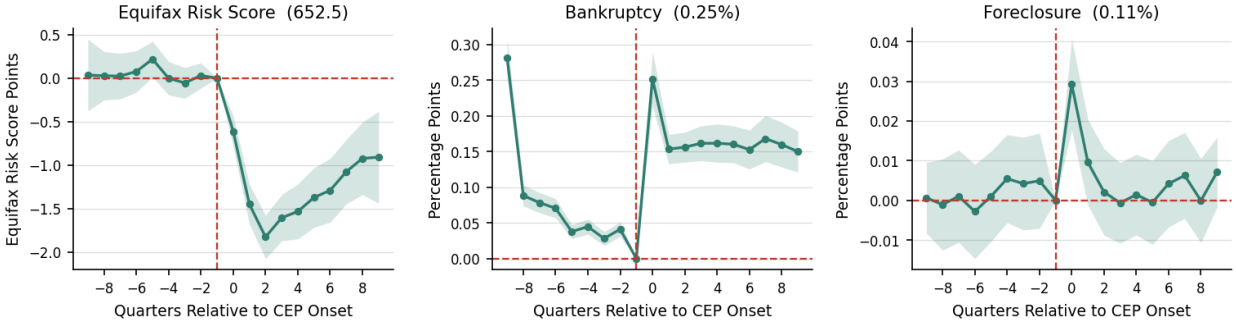
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d. Mortgage



e. Creditworthiness and Catastrophic Events

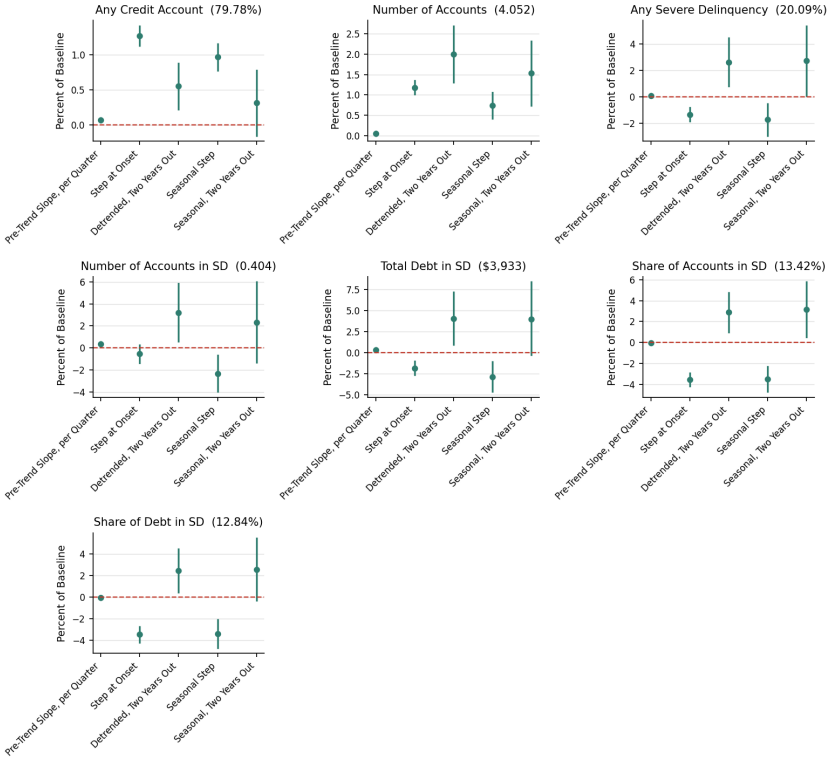


Notes. Event-study coefficients with 95 percent confidence intervals shaded. The vertical dashed line marks the omitted reference quarter, and event time is binned at the end points, nine quarters before and after onset, so the first and last points pool every earlier and later quarter. Coverage is held at its onset value throughout. Each vertical axis carries the outcome's own units and the figure in parentheses after each panel title is its pre-treatment baseline. The four outcomes in Figure 2 are repeated here for completeness.

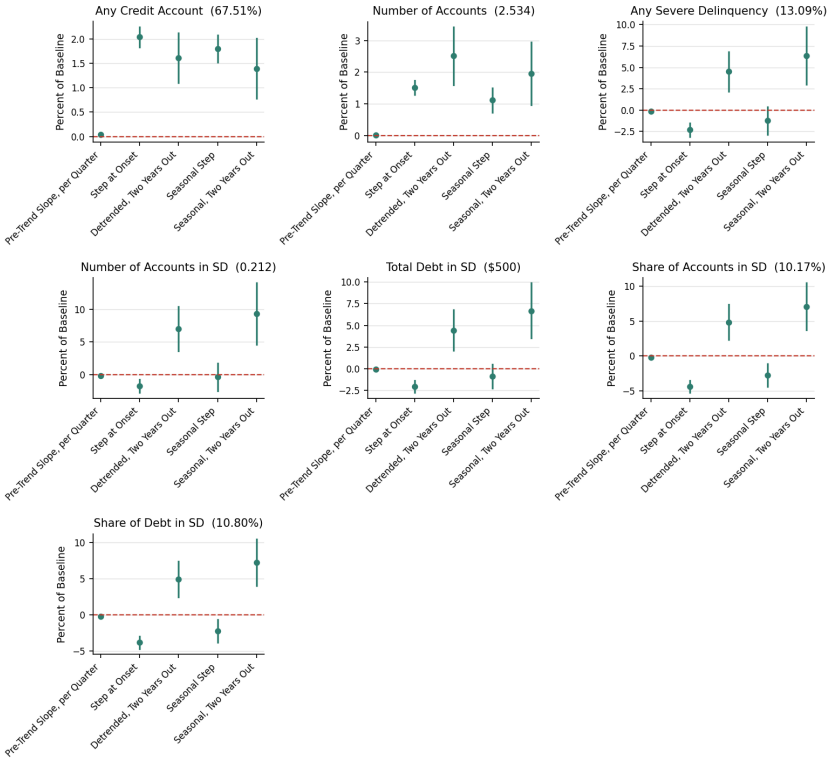
Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022).

Figure OA9. Event-Study Contrasts, All Outcomes

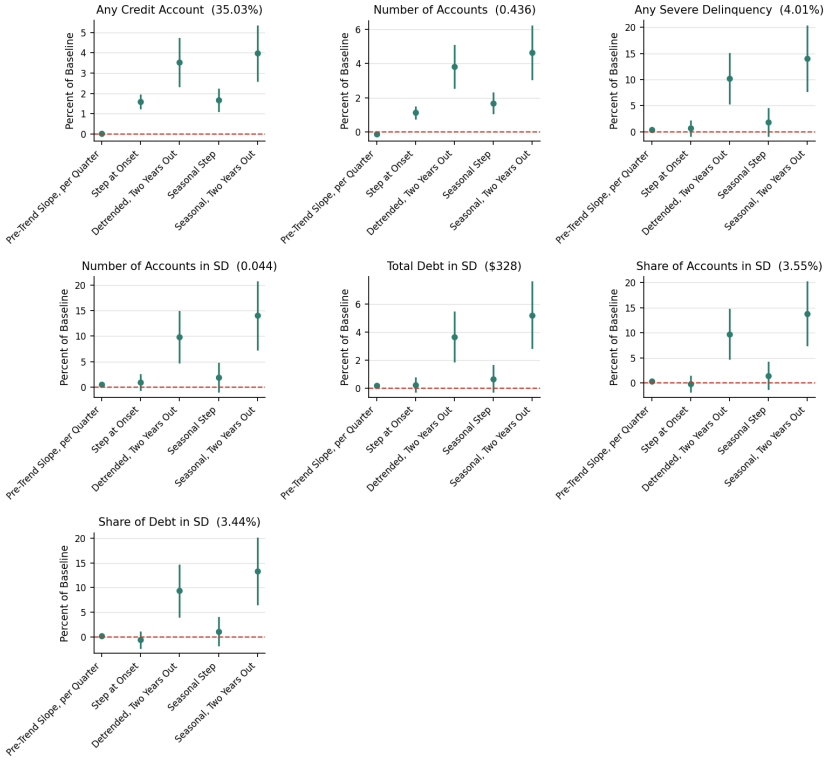
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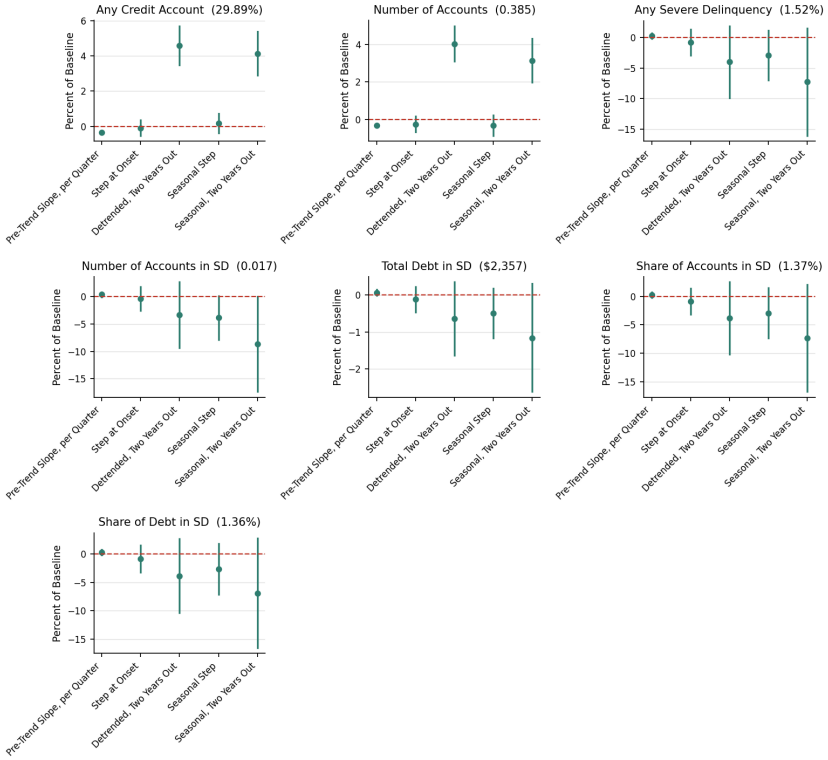
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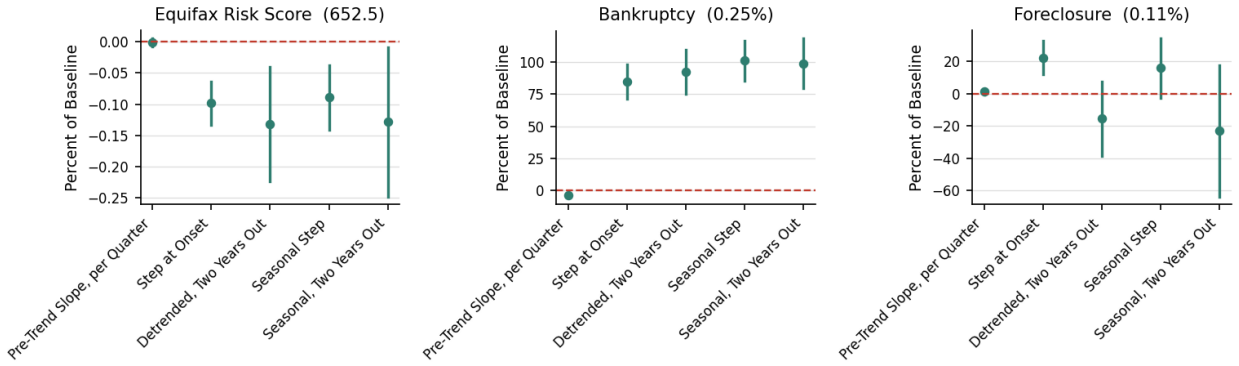
c. Auto



d. Mortgage



e. Creditworthiness and Catastrophic Events

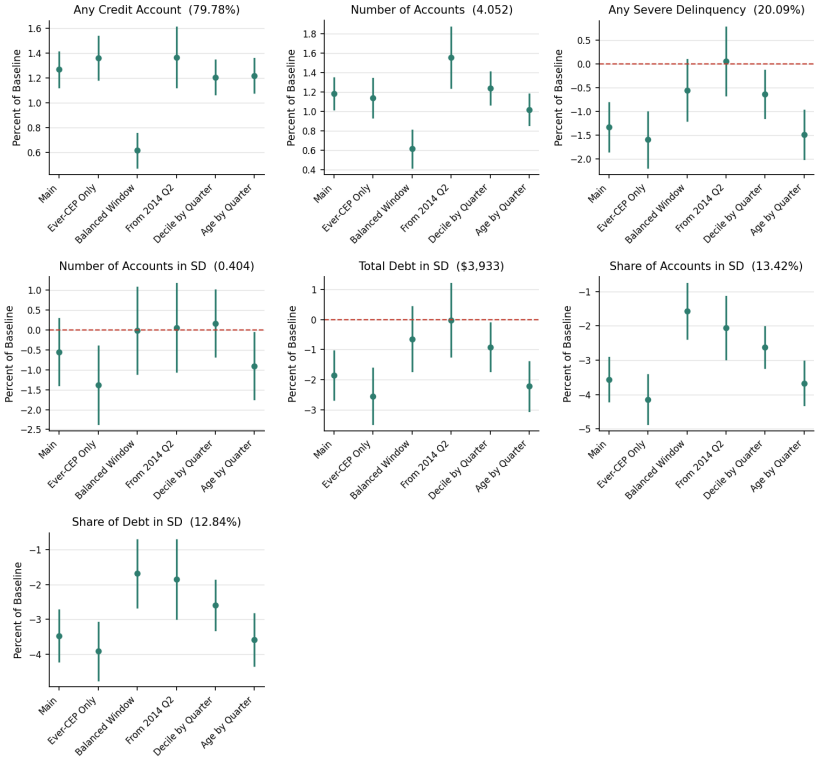


Notes. Contrasts from the main event study, as a percentage of each outcome's pre-treatment baseline, with 95 percent confidence intervals. The pre-trend slope is per quarter, fitted over the quarters from eight to two before onset. The step at onset is the change from two quarters before onset to the onset quarter. The detrended effect is the effect two years after onset net of the slope carried forward. The seasonal step is the change from four quarters before onset to the onset quarter net of the same change a year earlier, and the seasonal effect two years out sets that quarter against the same quarter before onset, net of the pre-onset trend.

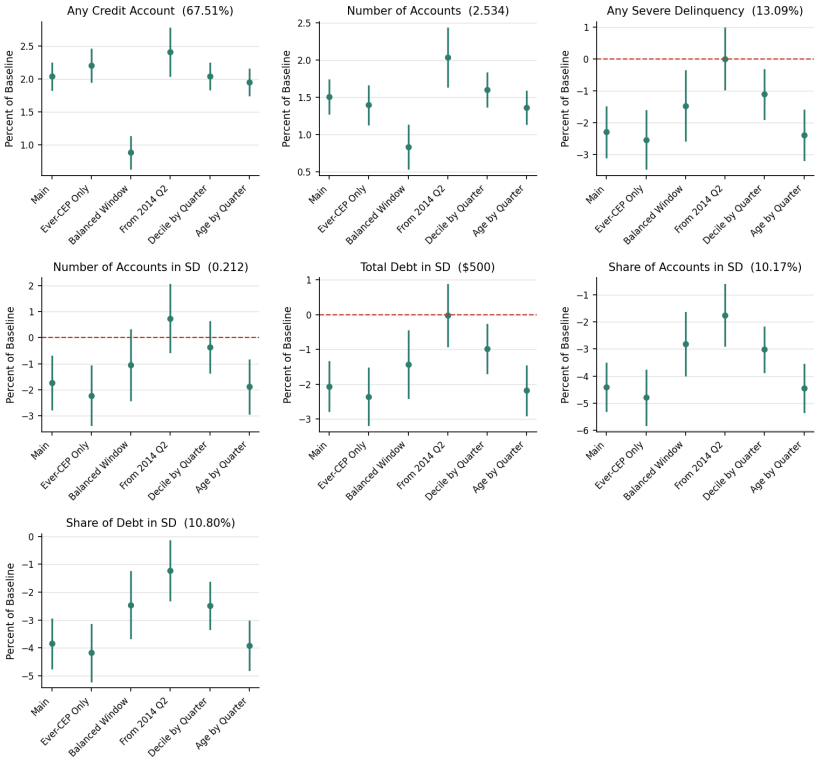
Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022).

Figure OA10. Step at Onset by Sample

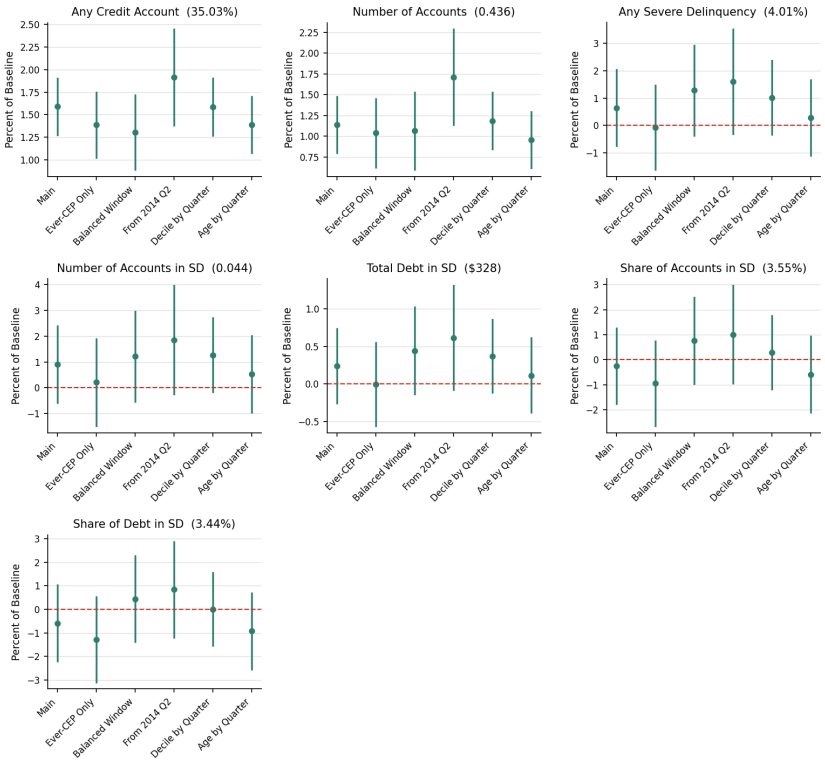
a. Aggregate



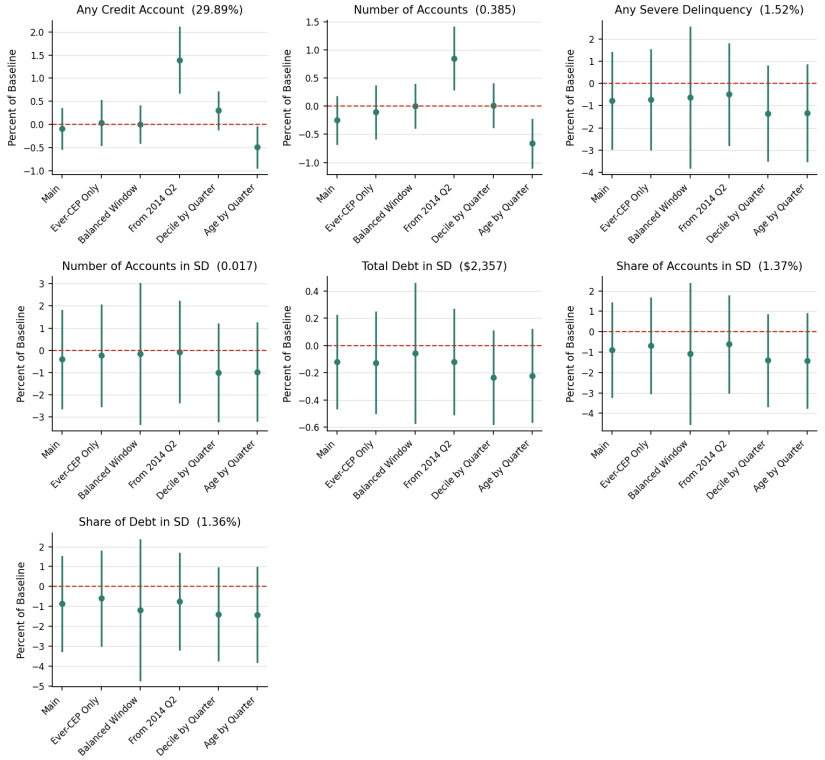
b. Revolving



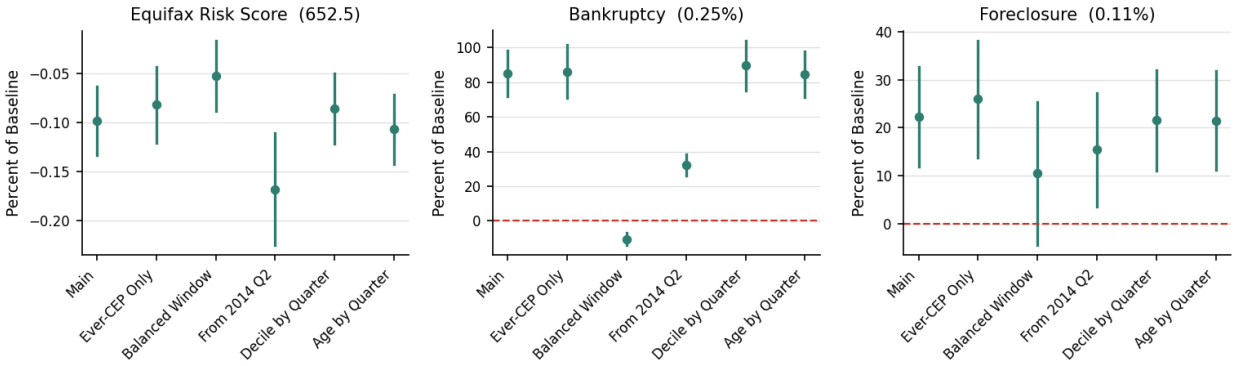
c. Auto



d. Mortgage



e. Creditworthiness and Catastrophic Events

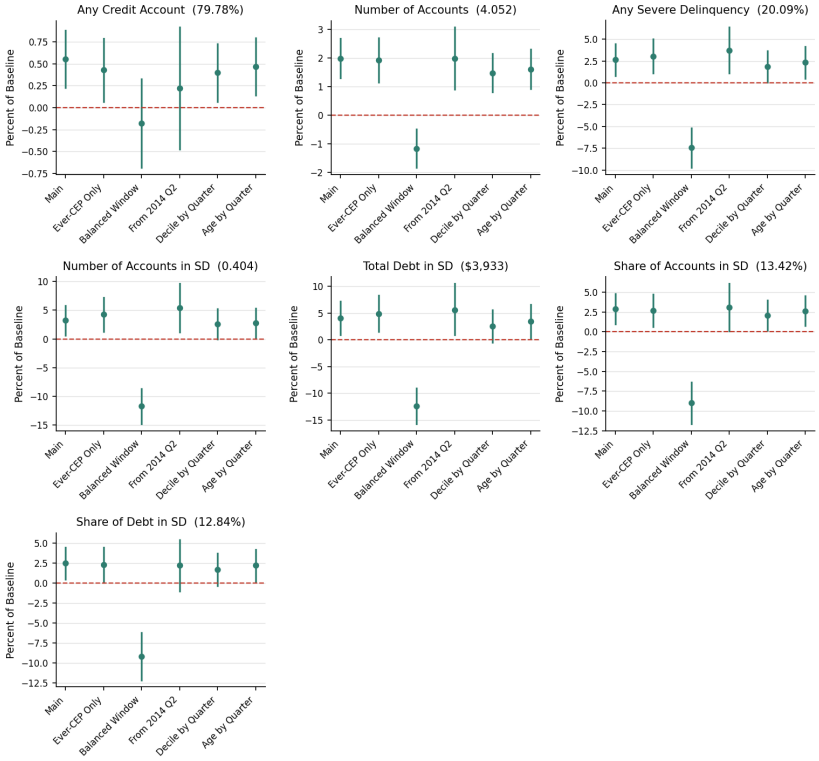


Notes. The step at onset, the change from two quarters before onset to the onset quarter, as a percentage of each outcome's pre-treatment baseline, with 95 percent confidence intervals. Main is the event study in the main specification. Ever-CEP only compares CEP tracts with each other. The balanced window keeps people observed in every quarter from eight quarters before onset to eight after. From 2014 Q2 drops each person's earlier quarters. Decile by quarter and age by quarter add effects for each baseline tract-income decile, or each five-year age band, in each quarter.

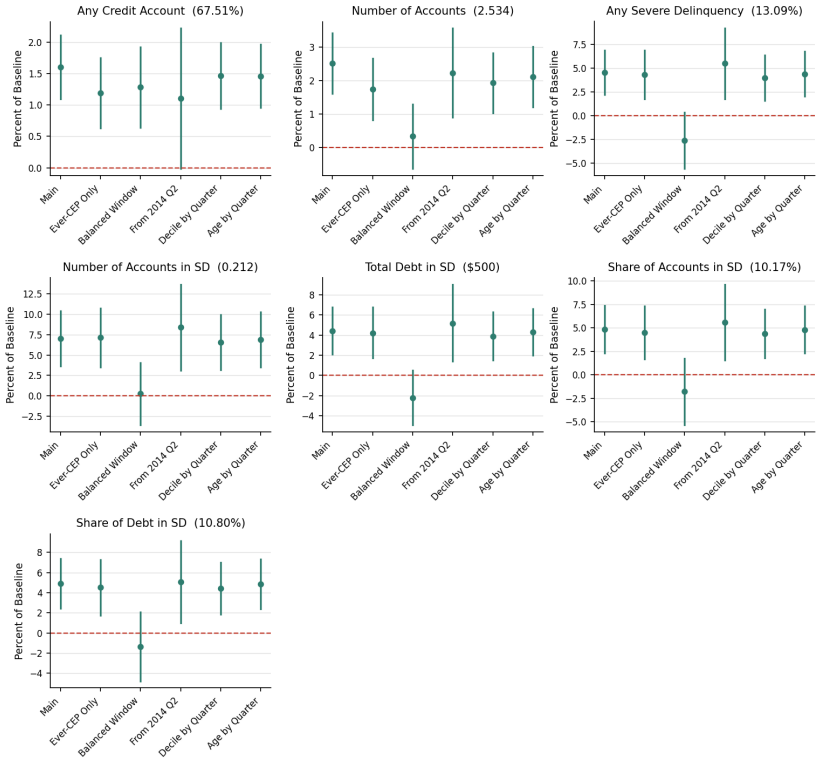
Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022).

Figure OA11. Detrended Effect Two Years Out by Sample

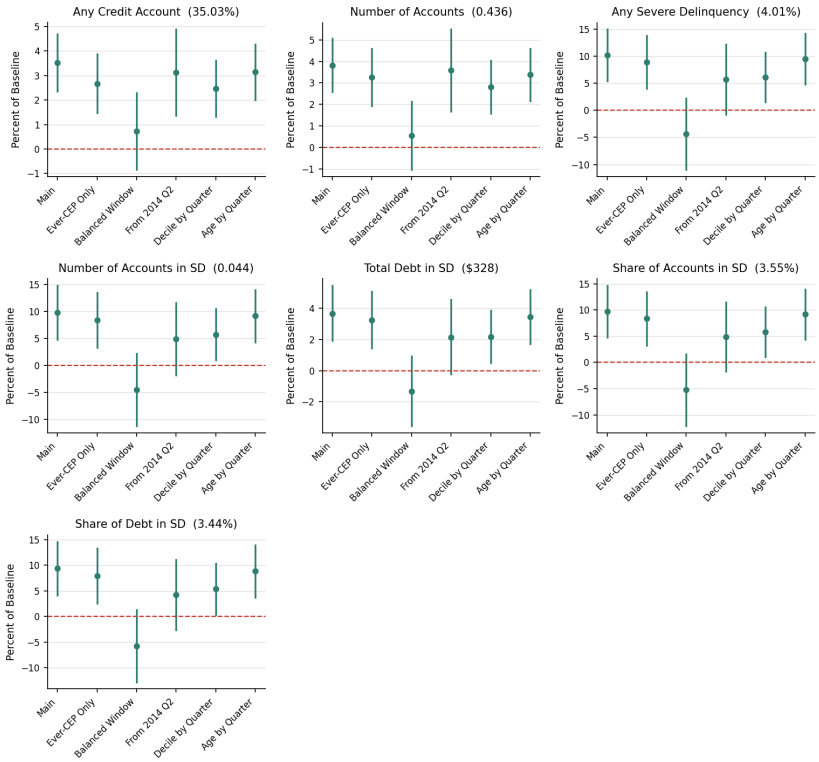
a. Aggregate



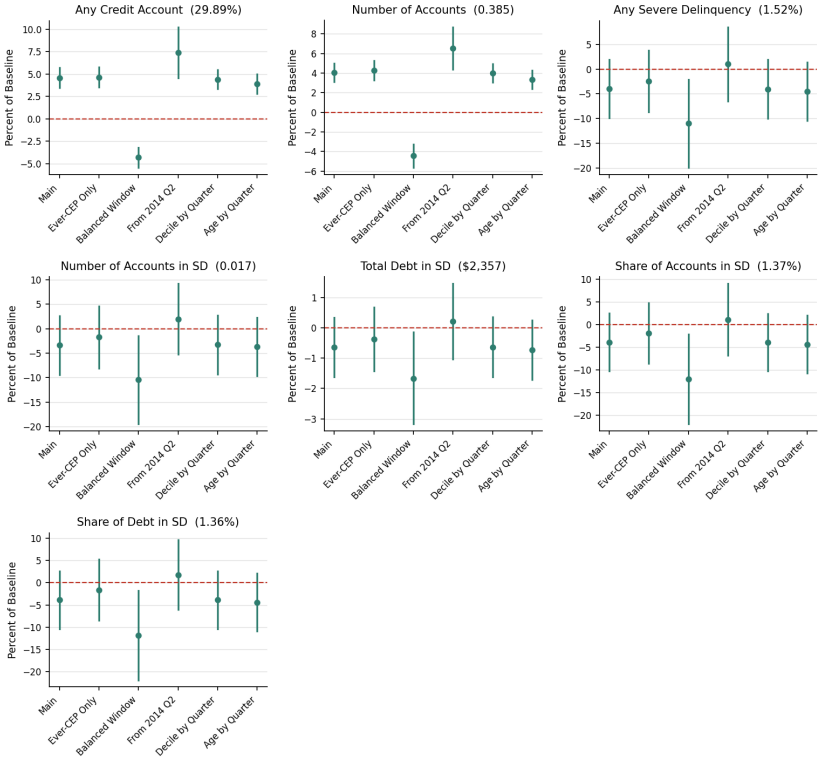
b. Revolving



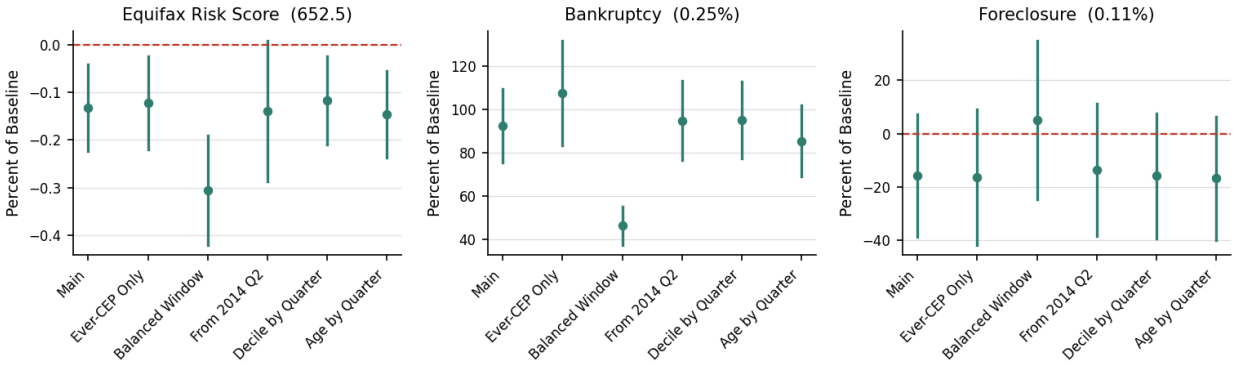
c. Auto



d. Mortgage



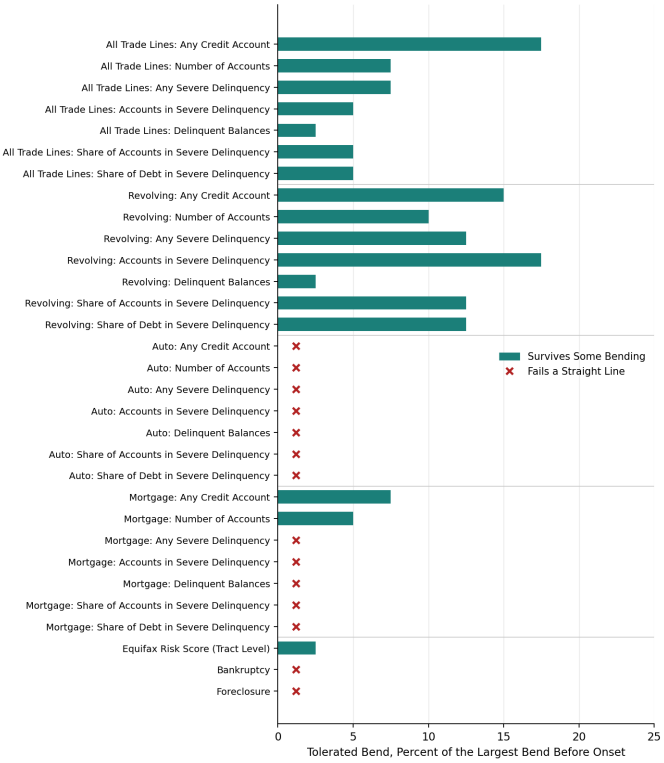
e. Creditworthiness and Catastrophic Events



Notes. The effect two years after onset net of the pre-onset slope carried forward, as a percentage of each outcome's pre-treatment baseline, with 95 percent confidence intervals. The samples and specifications are those of Online Appendix Figure OA10.

Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022).

Figure OA12. Smoothness Bounds, All Outcomes



Notes. Rambachan and Roth (2023) bounds under the smoothness restriction, on the Callaway-Sant'Anna event study, for the average effect over the twelve quarters from onset. The grid is in multiples of each outcome's largest pre-period second difference, from 0 to 0.25 in steps of 0.025. Bars give the largest bend an outcome survives, as a percentage of its largest pre-period second difference. The tract-level Equifax Risk Score is a rise, the opposite of the person-level decline, and is set aside in the text because its placebos exceed its effect. A cross marks outcomes that do not survive a straight line.

Source. Federal Reserve Bank of New York Consumer Credit Panel/Equifax; school-level CEP participation data from Ruffini (2022).