

Background:

Hi, I calculated abnormal returns in an event study. The abnormal return is, therefore, the cumulative abnormal return, **CAR**. Now I need to check the impact of different variables on the CAR. CAR is therefore the dependent variable. As I have two subsamples (COVID-19 dummy = 0 or 1), which indicated whether the event happened before (=0) or during COVID (=1). My focus of interest is the test during COVID.

- Please perform OLS regressions.
 - Please run first the needed tests.
 - It could be wise, to winsorize the dependent variable. If you do so, use the Winsor-function to make outliers adopt the values of the 5th- and 95th percentile.
 - Please test at least with the t-test. I don't think that the sample holds normality. Therefore, a non-parametric test like the Wilcoxon-test would make sense.
 - I don't know how exactly ANOVA works, but if you would be able to test Pre/During COVID this would be nice. The most variables are dummy variables. If it is possible to test even here both, it would be nice. Otherwise test the outcome, I want to prove.
 - Is there any additional test you have in mind? Pearson Correlation Matrix of used variables to test multicollinearity (or anything that makes more sense – because of the various dummy variables the correlation matrix will not be so powerful)?
 - For any questions, reach out to me.
 - **Output should be the requested things as the R Code and Tables (for the summary statistics)**
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What I want to show:

Hypothesis 1:

COVID-19 has a positive impact on the cumulative abnormal return (CAR = dependent variable).

Variable of interest:

COVID-19

Hypothesis 2:

The size has a positive impact on the cumulative abnormal return (CAR = dependent variable) during COVID-19.

Variables of interest:

Size_revenue x COVID-19

Hypothesis 3:

The financial strength has a positive impact on the cumulative abnormal return (CAR = dependent variable) during COVID-19.

Variables of interest:

EBITDA_pos_2020 x COVID-19
revenue_pos_2020 x COVID-19
P/E Dummy x COVID-19

The financial strength together with the size has a positive impact on the cumulative abnormal return (CAR = dependent variable) during COVID-19.

Size_revenue x EBITDA_pos_2020 x COVID-19
Size_revenue x revenue_pos_2020 x COVID-19
Size_revenue x P/E Dummy x COVID-19

Local transaction (cross-border = 0) has a positive impact on the cumulative abnormal return (CAR = dependent variable).

cross border x COVID-19

V12: size relative

CAR 1:	CAR 2:
1. a) CAR = V1 b) CAR = V1 + V2 b) CAR = V1 + V3+ V5 + V12 2. a) CAR = V1 + V3 + V5 + V10+ V12 + V10 x V1 b) CAR = V1 + V3 + V5 + V10+ V11 + V12 + V11 x V1 3. a) CAR = V1 + V3+ V5 + V7+ V12 + V7 x V1 b) CAR = V1 + V3+ V5 + V8+ V12 + V8 x V1 c) CAR = V1 + V3+ V5 + V9+ V12 + V9 x V1 4. a) CAR = V1 + V3+ V5 + V7+ + V10 + V12 + V10 X V7 x V1 b) CAR = V1 + V3+ V5 + V7+ + V10 + V12 + V10 X V8 x V1 c) CAR = V1 + V3+ V5 + V7+ + V10 + V12 + V10 X V9 x V1 5. CAR = V1 + V3+ V4 + V5 + V12 + V4 x V1	6. a) CAR = V1 b) CAR = V1 + V2 b) CAR = V1 + V3+ V5 + V12 7. a) CAR = V1 + V3 + V5 + V10+ V12 + V10 x V1 b) CAR = V1 + V3 + V5 + V10+ V11 + V12 + V11 x V1 8. a) CAR = V1 + V3+ V5 + V7+ V12 + V7 x V1 b) CAR = V1 + V3+ V5 + V8+ V12 + V8 x V1 c) CAR = V1 + V3+ V5 + V9+ V12 + V9 x V1 9. a) CAR = V1 + V3+ V5 + V7+ + V10 + V12 + V10 X V7 x V1 b) CAR = V1 + V3+ V5 + V7+ + V10 + V12 + V10 X V8 x V1 c) CAR = V1 + V3+ V5 + V7+ + V10 + V12 + V10 X V9 x V1 1. CAR = V1 + V3+ V4 + V5 + V12 + V4 x V1