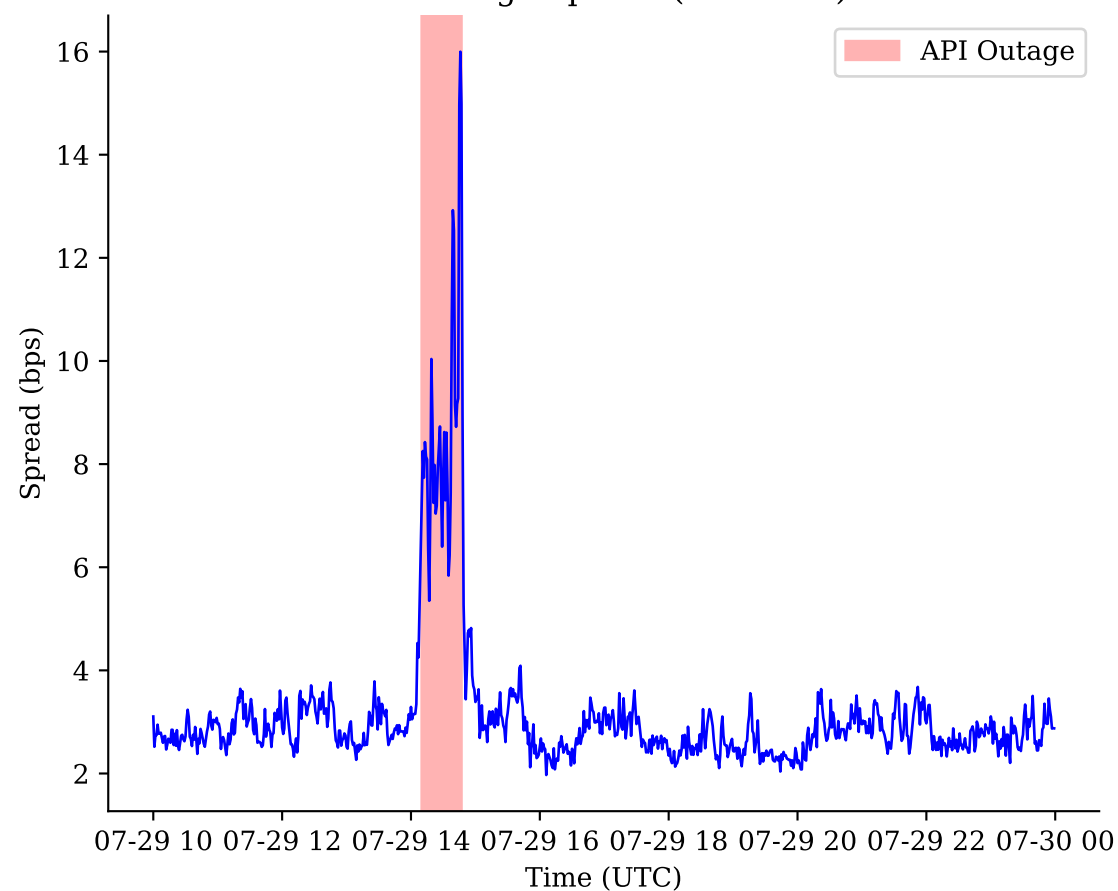
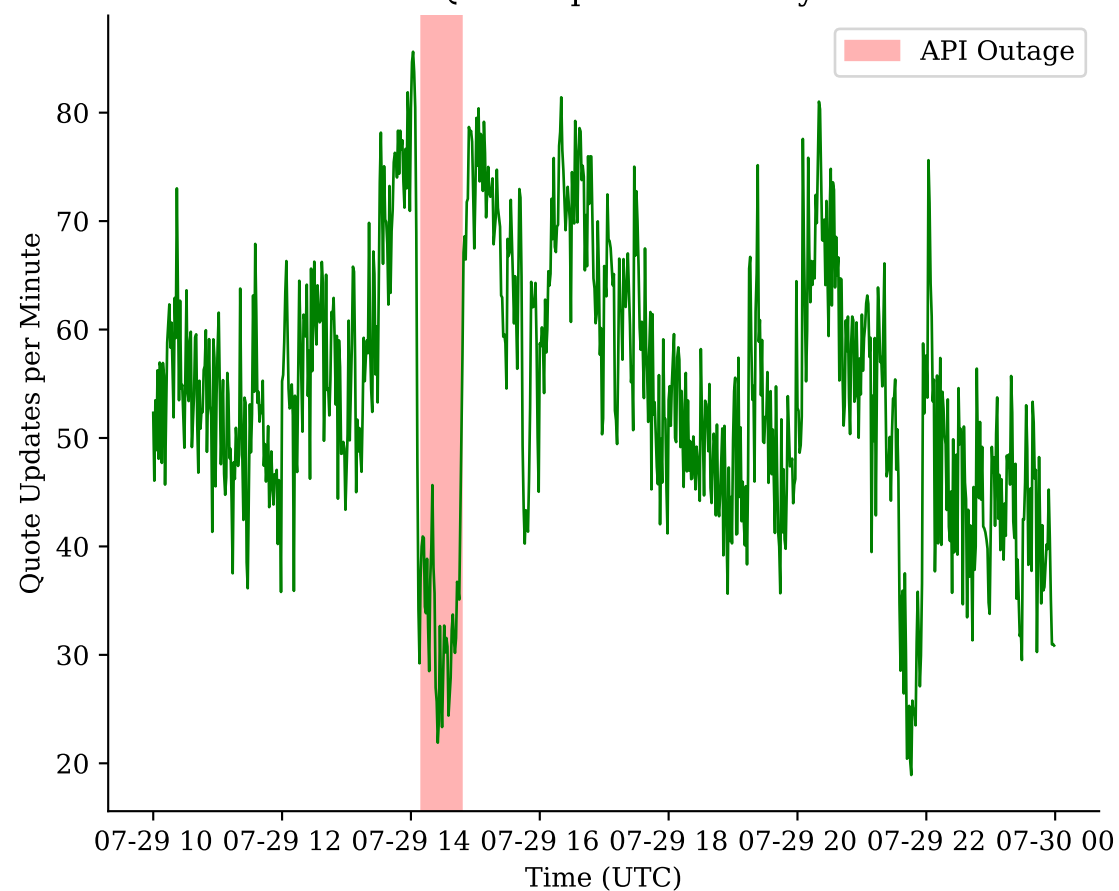


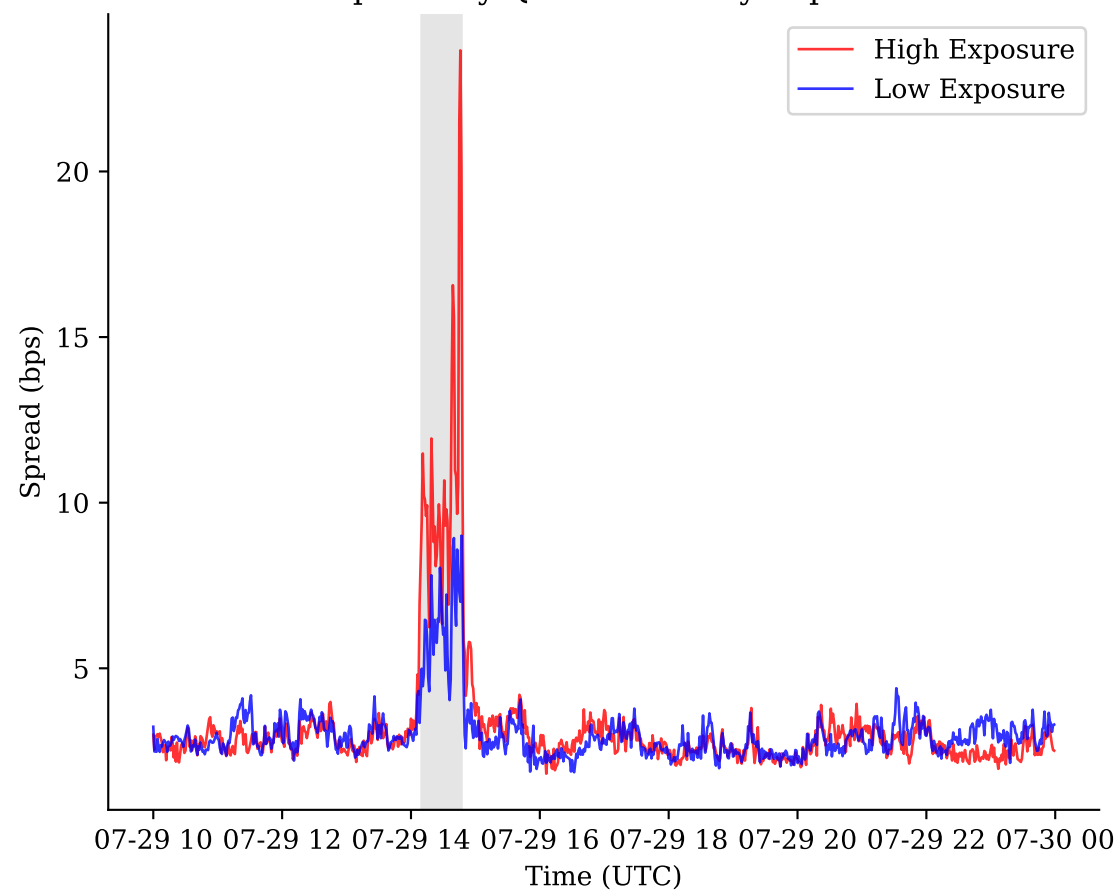
A. Average Spread (50 assets)



B. Quote Update Intensity



C. Spread by Quote Intensity Exposure



D. Summary

TRIPLE-DIFF RESULTS (50 ASSETS)

	Coef	t-stat
Spread (bps):		
Outage Hour	+4.336	20.16***
Outage × Exposure	+1.112	5.43***
Quote Updates:		
Outage Hour	-25.2	-45.11***
Outage × Exposure	-8.2	-16.96***

N = 84,000 minute-asset obs

Assets = 50

*** p < 0.01