Faster, Wider, More Fragile?

The Evolution of Intraday Shock Propagation in U.S. Equity Markets, 1992–2026

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CRediT authorship contribution statement

Simon-Pierre Boucher: *Conceptualization* — posed the research question, formulated the central hypothesis on the asymmetric evolution of shock absorption and transmission, and designed the overall research program; *Methodology* — developed the shock-identification framework (leave-one-out residualization with strictly lagged loadings and robust seasonal standardization), the matched-placebo difference-in-differences estimand, the network-differential design, and the day-block bootstrap inference; *Software* — wrote the full analysis pipeline, from checksum-verified data acquisition through event detection, estimation, and automated table and figure generation; *Validation* — designed and executed the multi-stage data audit (calendar, timezone, integrity, corporate actions, survivorship) and the falsification battery (pre-event tests, placebo networks, announcement-window and tick-regime exclusions); *Formal analysis* — carried out all estimations and robustness analyses; *Investigation* — conducted the event-level study of 1.85 million idiosyncratic shocks and the systemic co-jump analysis; *Data curation* — constructed the cleaned minute panel, the ticker-spell identity map, the lagged trading universes, and the corporate-action screens, with complete manifests and checksums; *Writing – original draft* — wrote the manuscript; *Writing – review & editing* — revised the manuscript; *Visualization* — designed and produced all figures.

Declaration of competing interest

The author declares that he has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Data availability

The underlying market data were originally sourced from Finnhub.io (`https://finnhub.io`). The aggregated monthly archive used in this study is publicly accessible; the exact

byte-level snapshot is pinned and checksum-verified. Complete replication materials—code, configuration, manifests, machine-readable results, and figure source data—accompany the paper and permit regeneration of every number in the manuscript from the raw data.

Declarations

The manuscript is the author's original work, has not been published previously, and is not under consideration by any other journal. All results reported are generated programmatically from the accompanying replication package; no result has been selectively omitted.