

# **Trading While Sleepy? Circadian Mismatch and Excess Volatility in a Global Experimental Asset Market**

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## **Abstract**

Traders in global markets operate at different local times-of-day. Suboptimal times-of-day may produce sleepiness due to daily variations in sleep/wake patterns and possibly also increased accumulation of hours awake. Global asset markets imply significantly increased heterogeneity in circadian timing, and likely sleepiness, of trader decisions compared to localized markets. We examine these factors by administering single-location and global sessions of an online asset market experiment that regularly produces valuation bubble and crash events. Global sessions involved real time trades between subjects in two locations 16 time zones apart (i.e., “global” markets) and at varied local times of day across sessions. We find asset market bubbles occur in all sessions, but global markets had significantly more extreme and longer duration valuation bubbles. Additionally, subjects at the most suboptimal times-of-day held significantly more asset shares in their portfolios in late trading rounds compared to other subjects – a risky strategy with overvalued shares. Overall, our results highlight a unique but underappreciated factor present across traders in global market environments. They also point to the importance of a relatively common cognitive state (i.e., suboptimal time-of-day) in attempting to understand trader behavior and, ultimately, market outcomes.

## **Speaker Profile**

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