

Momentum Bubbles; A New Perspective Derived from Log-Periodicity

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Abstract

This study examines the predictability of momentum bubbles by calibrating log-periodic power law singularity (LPPLS) models from November 03, 1926 to November 30, 2023. We explore LPPLS signatures prior to major momentum downturns and evaluate how the model's predictive accuracy varies as bubbles approach their peak. The key findings indicate that LPPLS signatures serve as early warnings before significant momentum bubbles, validating the LPPLS model's ability to identify early signs of bubble formation in a zero-cost trading strategy. By analyzing the accuracy of predictions derived from LPPLS model calibrations 3, 6, 9, and 12 months prior to the bubble peak, our study provides empirical evidence that predictive accuracy does not improve linearly as the peak approaches but shows partial improvement.

Keywords: financial bubble, log-periodic power law, momentum bubbles, LPPLS model