Sluggish Private Investment in Japan's Lost Decade: Mixed Frequency Vector Autoregression Approach

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Abstract

It is well known that sluggish private investment plagued the Japanese macroeconomy in the Lost Decade. Past empirical papers have not reached a clear consensus on what caused the investment slowdown. This paper sheds new light on this issue by applying mixed frequency vector autoregressive (MF-VAR) techniques to monthly stock prices, quarterly bank loans, firm profit, and private investment. First, we reveal a spiral of declining stock prices, profit, and investment. Second, monthly stock prices explain as much as 50.3% of the long-run forecast error variance of investment. Third, the stagnation of bank loans is a consequence (and not a cause) of declining stock prices and investment. Aggregating monthly stock prices into a quarterly level underestimates the influence of stock prices. It also makes the spiral of stock prices, profit, and investment less apparent. The mixed frequency approach therefore yields richer economic insights into Japan's sluggish investment than the classical single-frequency approach.

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