

# Forecasting Public Investment Using Daily Stock Returns<sup>☆</sup>

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## Abstract

This paper investigates the predictability of public investment in Japan using the daily excess stock returns of the construction industry, to contribute to the recent discussion on fiscal foresight. To examine the relationship between monthly public investment and daily stock returns without any prior time aggregation, we employ the VAR model with MIDAS regression and estimate the optimal weights for connecting high-frequency and low-frequency data in addition to VAR coefficients and the variance-covariance structure. We find that the VAR model with MIDAS regression reduces the mean square prediction error in out-of-sample forecasting by approximately 15% and 2.5% compared to the no-change forecast and VAR model forecasting with prior time aggregation, respectively. Moreover, using the local projection method, we find evidence of the fiscal news shock estimated in our proposed model delaying positive effects on output, consumption, hours worked, and real wage when news shocks actually result in increasing public investment. This finding suggests the New Keynesian structure of the Japanese economy.

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