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# Predicting regime switches in the VIX index with macroeconomic variables

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## Abstract

In this article, we investigate the role of US macroeconomic variables as leading indicators of regime shifts in the VIX index using a regime-switching approach. We find that the[...]10 period: tranquil [...]isis regime with ext[...]ranquil to the turm[...]



## Acknow[...]

We than[...]able suggesti[...]d do not necessarily reflect those of the Bank of Japan.

## Notes

[1]One closely related study is of Chen and Clements (2007), who investigate the impact of monetary policy announcement on the VIX index, although they do not investigate regime switches.

[2]The structural breaks are detected by minimizing the sum of squared errors of each partitioned period.

[3]Bussiere and Fratzscher (2006) suggest the usefulness of a regime-switching approach in the early warning system model because it can determine the timing and the length of different regimes endogenously.

[4]For a robustness check, we also estimated three-regime-switching model without this restriction. We conducted likelihood ratio test and found that the model without the restriction did not significantly outperform the model with the restriction at the 5% level.

[5]All the macroeconomic variables are obtained from Bloomberg.