

[Home](#) > [Computational Economics](#) > Article

# Modelling Federal Reserve Discount Policy

| Published: April 1997

| Volume 11, pages 53–70, (1997) [Cite this article](#)

Bookmark [Save article](#)

[View saved research >](#)



## [Computational Economics](#)

[Aims and scope →](#)

[Submit manuscript →](#)

[Christopher F. Baum<sup>1</sup>](#) & [Meral Karasulu<sup>2</sup>](#)

121 Accesses 20 Citations [Explore all metrics →](#)

## Abstract

We employ threshold cointegration methodology to model the policy problem solved by the Federal Reserve System in their manipulation of the discount rate under a reserves target operating procedure utilized since October 1979. The infrequent and discrete adjustments that characterize movements in the discount rate instrument vis-a-vis the Federal Funds rate do not lend themselves to a linear cointegration framework. The inherently nonlinear relationship arising from the Fed's self-imposed constraints on discontinuously changing the discount rate is satisfactorily modelled as an instance of threshold cointegration between the discount rate and the Federal Funds rate.



This is a preview of subscription content, [log in via an institution](#) to check access.

## Access this article

[Log in via an institution →](#)

## Subscribe and save

Springer+

from €37.37 /Month

- Starting from 10 chapters or articles per month
- Access and download chapters and articles from more than 300k books and 2,500 journals
- Cancel anytime

[View plans →](#)

## Buy Now

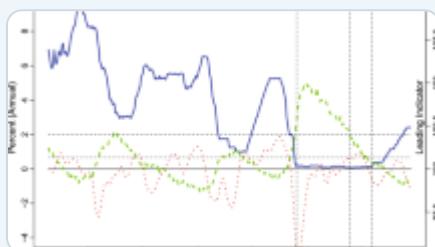
[Buy article PDF 39,95 €](#)

Price includes VAT (Poland)

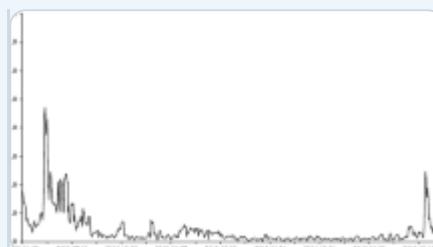
Instant access to the full article PDF.

[Institutional subscriptions →](#)

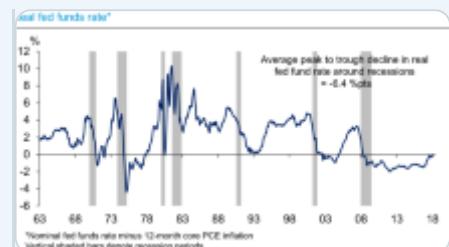
## Similar content being viewed by others



[Federal Reserve policy after the zero lower bound: an indirect inference approach](#)



[Unconventional monetary policy and the stock market](#)



[The case against price-level targeting](#)

Article | 07 February 2020

Article | 05 June 2023

Article | 14 June 2018

## Explore related subjects

Discover the latest articles, books and news in related subjects, suggested using machine learning.

[Computational Economics](#)

[Econometrics](#)

[Financial Econometrics](#)

[Microeconomics](#)

[Quantitative Economics](#)

[Quantitative Finance](#)

## References

Andrews, D.W.K. (1993). Tests for parameter instability and structural change with unknown change point, *Econometrica* **61**: 821-856.

[Google Scholar](#)

Bai, J. and Perron, P. (1994). *Testing for and Estimation of Multiple Structural Changes*, unpublished working paper, M.I.T., (October).

Balke, N. and Fomby, T. (1994). *Threshold Cointegration*, unpublished working paper, Southern Methodist University, (October).

Cook, T. (1989). Determinants of the Federal funds rate, 1979-1982, *Federal Reserve Bank of Richmond Economic Review* **75**: 3-19.

[Google Scholar](#)

Engle, R. and Granger, C.W.J., (1987). Co-integration and error correction: representation, estimation and testing, *Econometrica* **55**: 251-276.

[Google Scholar](#)

Goodfriend, M. (1983). Discount window borrowing, monetary policy, and the post-October 6, 1979 Federal Reserve operating procedure, *Journal of Monetary Economics* **12**: 343-356.

[Google Scholar](#)

Goodfriend, M. (1991). Interest rates and the conduct of monetary policy, *Carnegie-Rochester Conference Series on Public Policy*, **34**: 7-30.

[Google Scholar](#)

Goodfriend, M. and Whelpley, W. (1986). Federal funds: instrument of Federal Reserve policy, *Federal Reserve Bank of Richmond Economic Review*, (September-October), 3-11.

Hansen, B. (1996). Inference where a nuisance parameter is not identified under the null hypothesis, *Econometrica*, **64**: 413-430.

[Google Scholar](#)

Karasulu, M. (1995). Essays on the European exchange rate target zone, unpublished Ph.D. dissertation, Boston College.

Keir, P. (1981). Impact of discount policy procedures on the effectiveness of reserve targeting, in *New Monetary Control Procedures*, Federal Reserve Staff Study, Vol. 1, (February).

Kwiatkowski, D., Phillips, P.C.B., Schmidt, P. and Shin, Y. (1992). Testing the null hypothesis of stationarity against the alternative of a unit root: How sure are we that economic time series have a unit root?, *Journal of Econometrics* **54**: 159-178.

[Google Scholar](#)

Peristiani, S. (1991). The model structure of discount window borrowing, *Journal of Money, Credit and Banking* **23**(1): 13-34.

[Google Scholar](#)

Priestley, M.B. (1988). *Non-linear and Non-stationary Time Series Analysis*, Academic Press, London.

[Google Scholar](#)

Tinsley, P. et al. (1982). Policy robustness: specification and simulation of a monthly money market model, *Journal of Money, Credit and Banking* **14**(4): pt. 2 829-856.

[Google Scholar](#)

Tong, H. (1983). *Threshold Models in Non-linear Time Series Analysis*, Lecture Notes in Statistics Vol. 21. Springer-Verlag, New York.

[Google Scholar](#)

Tong, H. (1990). *Non-linear time series: A dynamical system approach*. Clarendon Press, Oxford.

[Google Scholar](#)

Tsay, R. (1989). Testing and modeling threshold autoregressive processes, *Journal of the American Statistical Association* **84**: 231-240.

[Google Scholar](#)

## Author information

---

### Authors and Affiliations

**Department of Economics, Boston College, Chestnut Hill, MA, 02167, USA.**  
Christopher F. Baum

**Bogaziçi University, USA**

Meral Karasulu

# Rights and permissions

## Reprints and permissions

## About this article

### Cite this article

Baum, C.F., Karasulu, M. Modelling Federal Reserve Discount Policy. *Computational Economics* 11, 53–70 (1997). <https://doi.org/10.1023/A:1008622613557>

Issue date

April 1997

DOI

<https://doi.org/10.1023/A:1008622613557>

### Keywords

[Operating Procedure](#)

[Economic Theory](#)

[Discount Rate](#)

[Nonlinear Relationship](#)

[Federal Reserve](#)

### Profiles

1. Christopher F. Baum



[View author profile](#)

### Search

Search by keyword or author



### Navigation

**Find a journal**

---

**Publish with us**

---

**Track your research**