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# A theory of money and financial institutions: Fiat money and noncooperative equilibrium in a closed economy

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# **Abstract**

Fiat money is a type paper or symbol with which any individual may buy most things by law. It has virtually no intrinsic value but immediately assumes a trading value when its shortage (i.e., when it is no longer a slack variable to everyone in the appropriate set of simultaneous programs) can prevent trades that would have been deemed profitable in a nonmonetary competitive equilibrium system.

This paper sketches an approach to a theory of flat money by investigating the properties of a noncooperative dynamic trading game embedded within a closed economic system.

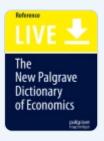
Among the conclusions are that inflation and deflation are not symmetric, and that it is not possible to define a noncooperative game involving borrowing without specifying "rules of borrowing" or a bankruptcy law.



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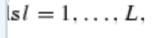
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## References

ARCHIBALD, G. C., and R. G. LIPSEY: Monetary and Value Theory: A Critique of Lange and Patinkin. Review of Economic Studies, 26, 1–22, 1958.

**Google Scholar** 

ARROW, K. J., and G. DEBREU: Existence of an Equilibrium for a Competitive Economy. Econometrica, 22, 265–290, 1954.

**Google Scholar** 

BAGEHOT, W.: Lombard Street. London: Dutton, 1921.

**Google Scholar** 

BAUMOL, W. J.: Stocks, Flows and Monetary Theory. Quarterly Journal of Economics, Vol. 76, February 1962, pp. 46–56.

**Google Scholar** 

BORCH, K.: Economics of Uncertainty. Studies in Mathematical Economics, Vol. 2, Princeton: Princeton University Press, 1968.

Google Scholar

CLOWER, R. W. (ed.): Monetary Theory. Middlesex: Penguin Books Ltd., 1970.

Google Scholar

DIAMOND, P. A.: The Evaluation of Infinite Utility Streams, Econometrica, **33**, 170-177, 1965.

Google Scholar

EINZIG, PAUL: Primitive Money. London: Eyre and Spottiswoode (2nd. printing), 1951.

Google Scholar

FOLEY, D. K.: Economic Equilibrium with Costly Marketing. Working Paper N. 52, Department of Economics, Massachusetts Institute of Technology, February 1970.

FRIEDMAN, M.: The Quantity Theory of Money: A Restatement in Studies in the Quantity Theory of Money, M. FRIEDMAN (ed.), Chicago: Chicago University Press, 1956, pp. 3–21.

**Google Scholar** 

FRIEDMAN, M., and A. J. SCHWARTZ: A Monetary History of the United States. Princeton: Princeton University Press, 1963.

**Google Scholar** 

GALE, D.: Some Models of Steady State Dynamic Equilibrium. ORC 69-38, December 1969, University of California, Berkeley.

Google Scholar

GURLEY, J. G., and E. S.SHAW: Money in a Theory of Finance. Brookings Institute, 1960.

HAHN, F. H.: Equilibrium with Transactions Costs. Walres-Bowley lecture, Econometric Society, December 1969, mimeographed.

HICKS, J. R.: Value and Capital, Clarendon Press, 1939.

HIRSCHLIEFER, J.: Investment Decision under Uncertainty: Applications of the Static Preference Approach. Quarterly Journal of Economics, Vol. 80, May 1966.

JEVONS, W. S.: Money and the Mechanism of Exchange. London: Kegan Paul (21

JOHNSON, H. G.: Money, Trade and Economic Growth. London: Allen and Clawin, 1964.

**Google Scholar** 

KEYNES, J. M.: The General Theory of Employment, Interest and Money. MacMillan: London, 1936, p. 170.

**Google Scholar** 

KOOPMANS, T. C.: Economic Growth at a Maximal Rate. Quarterly Journal of Economics, August 1964, pp. 355–394.

-: Stationary Ordinal Utility and Impatience. Econometric, 28, 1970.

LEIJONHUFVUD, A.: Keynes and the Keynesians: A Suggested Interpretation. American Economic Review, Vol. 57, No. 2 (Papers and Proceeding), 1967, pp. 401–410.

**Google Scholar** 

MCKENZIE, L.: Turnpike Theorem for a Generalized Leontief Model. Econometrica, **31**, 165–180, 1963.

Google Scholar

NASH, J. F. JR.: Equilibrium Points in N-person Games. Proceedings of the National Academy of Sciences of the U.S.A., 36, 48–49, 1950.

**Google Scholar** 

OSTROY, J. M.: Exchange as an Economic Activity. Ph. D. Thesis, Northwestern University, Evanston, Illinois, August 1970.

**Google Scholar** 

PATINKIN, D.: Money, Interest and Prices, 2nd ed. Harper and Row, 1965.

PHELPS, E. S.: The Golden Rule of Accumulation. American Economic Review, September 1961, pp. 467–482.

RADNER, R.: Equilibrium under Uncertainty. Econometrica 36, 31-58, 1968.

Google Scholar

RUGGLES, N., and R. RUGGLES: The Design of Economic Accounts. New York: The National Bureau of Economic Research, 1970.

**Google Scholar** 

SAMUELSON, P. A.: What Classical and Neoclassical Monetary Theory Really Was. Canadian Journal of Economics 11, No. 1, 1–15, 1968.

Google Scholar

SCARF, H.: Some Examples of Global Instability of the Competitive Equilibrium. International Economic Review 1, 1960, No. 3.

SHAPLEY, L. S., and M.SHUBIK: Competition, Welfare and the Theory of Games (unpublished manuscript).

SHUBIK, M.: A Theory of Money and Banking in a General Equilibrium System. Research Memorandum No. 48, Institute for Advanced Study, Vienna, July 1970.

- -: On the Paradox of the Efficient Price System in a Completely Centralized Economy and in a Capitalist Individual Ownership Economy. Rand, P-4689, August 1971.
- -: A Theory of Money and Financial Institutions, Part III. Cowles Foundation Discussion Paper No. 324, 1972.

SOLOW, R. M.: Substitution and Fixed Proportions in the Theory of Capital. Review of Economic Studies, June 1962, pp. 207–218.

STARR, R.: Equilibrium and Demand for Media of Exchange in a Pure Exchange Economy with Transactions Costs. Cowles Foundation Discussion Paper no. 300, October 1, 1970.

TOBIN, J.: Money, Capital and Other Stores of Value. American Economic Review (Papers and Proceedings), Vol. 51, May 1961, pp. 26–37.

**Google Scholar** 

TOBIN, J., and W. C. BRAINARD: Financial Intermediaries and the Effectiveness of Monetary Controls. American Economic Review, Vol. 53, May 1963, pp. 383–400.

Google Scholar

VON NEUMANN, J., and O. MORGENSTERN: The Theory of Games and Economic Behavior. Princeton: Princeton University Press, 1944.

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