

Money, Prices and Interest Rates in a Non-Aggregate Stochastic General Equilibrium Model

Pedro J. Gutiérrez*

Universidad de Valladolid
Valladolid, Spain

Abstract

In this paper I explore the relationships between money, prices, uncertainty and interest rates in a stochastic general equilibrium model. Taking a non-aggregate pure exchange economy with time and uncertainty as the starting point, money is introduced as a means to keep track of past transactions of goods and insurance services and as an instrument to settle debts. As a result, in this stochastic general equilibrium model the desire to hold money arises from the demand of goods and services, Arrow-Debreu securities, and assets. Since these sources of demand for money are strongly related to the economy output, the economy degree of uncertainty, and the interest rates, this paper provides not only an alternative framework to the traditional keynesian analysis of the liquidity preference, but also an extension of the cash-in-advance models for introducing money in a general equilibrium model.

Keywords: Stochastic General Equilibrium; Demand for Money; Cash-in-Advance Model.

Published in

Applied Mathematical Finance, Vol. 11, 4, December 2004.

*Financial support from Science and Technology Department, Spanish Government, research project DGICYT BEC2002-02456, and from Castilla y León Autonomous Government, research project SA 061/02, is gratefully acknowledged. Correspondence to: Pedro J. Gutiérrez. Dpto. de Fundamentos del Análisis Económico. Universidad de Valladolid. Avda. Valle Esgueva, 6. 47011 Valladolid. SPAIN.
E-mail: pedrojos@fae.uva.es