Equilibrium and arbitrage in incomplete asset markets with fixed prices

P.J.J. Herings \textsuperscript{\textregistered} H. Polemarchakis \textsuperscript{\textregistered}

Working Paper No. 01-28

Department of Economics, Brown University

June, 2001

Abstract

At arbitrary prices of commodities and assets, \textsuperscript{\textregistered}x-price equilibria exist under weak assumptions: endowments need not satisfy an interiority condition, utility functions need only satisfy a very weak monotonicity requirement, and the asset return matrix allows for redundant assets. Prices of assets may permit arbitrage. At equilibrium, though restricted through endogenously determined trading constraints, arbitrage possibilities may persist; in an example, an individual holds an arbitrage portfolio.

Key words: incomplete asset market, \textsuperscript{\textregistered}x-price equilibrium, arbitrage.

JEL classification numbers: D45, D52, D60.

\textsuperscript{\textregistered}Department of Economics, Universiteit Maastricht, P.O. Box 616, 6200 MD Maastricht, The Netherlands; e-mail: p.herings@algec.unimaas.nl

\textsuperscript{\textregistered}Department of Economics, Brown University, Providence, R.I. 02912, USA; e-mail: herakles.polemarchakis@brown.edu