

Equilibrium asset pricing with Epstein-Zin and loss-averse investors

Jing Guo, Xue Dong He



PII: S0165-1889(16)30212-3  
DOI: <http://dx.doi.org/10.1016/j.jedc.2016.12.008>  
Reference: DYNCON3382

To appear in: *Journal of Economic Dynamics and Control*

Received date: 18 March 2016  
Revised date: 27 December 2016  
Accepted date: 29 December 2016

Cite this article as: Jing Guo and Xue Dong He, Equilibrium asset pricing with Epstein-Zin and loss-averse investors, *Journal of Economic Dynamics and Control*, <http://dx.doi.org/10.1016/j.jedc.2016.12.008>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# Equilibrium Asset Pricing with Epstein-Zin and Loss-Averse Investors \*

Jing Guo<sup>†</sup> and Xue Dong He<sup>‡</sup>

First version: June 5, 2015; This version: December 31, 2016

## Abstract

We study multi-period equilibrium asset pricing in an economy with Epstein-Zin (EZ-) agents whose preferences for consumption are represented by recursive utility and with loss averse (LA-) agents who derive additional utility of gains and losses and are averse to losses. We propose an equilibrium gain-loss ratio for stocks and show that the LA-agents are more (less) risk averse than the EZ-agents if their degree of loss aversion is higher (lower) than this ratio. When all the agents have unitary relative risk aversion degree and elasticity of intertemporal substitution, we prove the existence and uniqueness of the equilibrium and the market dominance of the EZ-agents in the long run. Finally, we extend our results to the case in which the LA-agents use probability weighting in their evaluation of gains and losses.

**Key words:** equilibrium asset pricing; heterogeneous agents; recursive utility; prospect theory; loss aversion; gain-loss ratio; market dominance

**JEL Codes:** D53, G02, G11, G12

---

\*We thank the participants of the 2014 INFORMS Annual Meeting at San Francisco, the 2014 SIAM Conference on Financial Mathematics and Engineering at Chicago, and the 5th International IMS-FIPS Workshop at Rutgers University for their comments and suggestions. The second author acknowledges support from a start-up fund at The Chinese University of Hong Kong.

<sup>†</sup>Department of Industrial Engineering and Operations Research, Columbia University, S. W. Mudd Building, 500 W. 120th Street, New York, NY 10027, USA. Email: [jg3222@columbia.edu](mailto:jg3222@columbia.edu).

<sup>‡</sup>Corresponding author. Room 609, William M.W. Mong Engineering Building, Department of Systems Engineering and Engineering Management, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong, [xdhe@se.cuhk.edu.hk](mailto:xdhe@se.cuhk.edu.hk).

Download English Version:

<https://daneshyari.com/en/article/5098008>

Download Persian Version:

<https://daneshyari.com/article/5098008>

[Daneshyari.com](https://daneshyari.com)