

**Department of Banking and Financial Management
University of Piraeus**



Research Seminar Series

**Thursday, January 22 2009
Time: 16:00 – 18:00, Room 013**

Seminar Title

“Non-marketability, taxation and the value of employee stock options”

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Summary

This paper uses the Benninga-Helmantel-Sarig (2005) framework to value employee stock options (ESOs) in a framework which takes explicit account of employee non-diversification. This framework provides an endogenous explanation of early exercise. With nondiversification, the valuation of ESOs is significantly less than both the Black-Scholes and the widely-used Hull-White (2004) model. Incentive stock options (ISOs) are generally inferior to non-qualified stock options (NSOs) and both ISOs and NSOs are inferior to cash compensation. Finally, corporate hedging of ESOs is suboptimal.

Simon Benninga is a professor of finance at Tel Aviv University and a visiting professor of finance at the Wharton School of the University of Pennsylvania. He holds degrees in mathematics and mathematical economics from the University of Michigan (BA) and Hebrew University (M.Sc.), and he completed his Ph.D. in finance at Tel-Aviv University in 1977. Benninga’s academic areas of interest are corporate finance, term structure, and computational finance. From 1993-2003 he edited the *Review of Finance*, the journal of the European Finance Association, which he founded. Benninga is the author of over 40 academic papers and of four books: *Numerical Techniques in Finance* (MIT Press, 1989), *Corporate Finance: A Valuation Approach* (with Oded Sarig, McGraw-Hill, 1997), *Financial Modeling* (MIT Press, 3rd edition 2006), and *Principles of Finance with Excel* (Oxford University Press, 2005).