

# Cash Flow Risk Management – In Good Times and Bad

Anthony “Tony” Sabbadini  
Michael Lim

2011 Enterprise Risk Management Symposium  
Society of Actuaries  
March 14-16, 2011

Copyright 2011 by the Society of Actuaries.

All rights reserved by the Society of Actuaries. Permission is granted to make brief excerpts for a published review. Permission is also granted to make limited numbers of copies of items in this monograph for personal, internal, classroom or other instructional use, on condition that the foregoing copyright notice is used so as to give reasonable notice of the Society’s copyright. This consent for free limited copying without prior consent of the Society does not extend to making copies for general distribution, for advertising or promotional purposes, for inclusion in new collective works or for resale.

## **Abstract**

Non-financial businesses face a variety of financial risks to their cash flow in good times, but in times of extreme economic volatility, proper risk management can mean the difference between survival and bankruptcy. This paper will review a risk management theory that deals with correlated, non-normally distributed factors, and then apply risk management techniques to the U.S. steel industry using futures contract hedging, which reduces a company's risk and increases profit during the worst part of the 2007-09 recession.

**Keywords:** Supply and demand shocks, futures derivatives, optimal hedging, U.S. steel industry, filtered historical simulation, GARCH(1,1).