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Steven E. Shreve* (shreve@andrew.cmu.edu), Department of Mathematical Sciences, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213. *Did Mathematics Cause the Subprime Mortgage Disaster?*

As we find ourselves working through the worst financial crisis since the Great Depression, we cannot help but ask what role mathematics played in this. Over the past twenty-five years the practice of finance has been revolutionized by the widespread adoption of mathematical models for pricing ever more exotic derivative securities. Mortgage-backed securities, which triggered the financial collapse, were priced using the Gaussian copula model, a mathematical construct. Based on the prices produced by this model, trillions of dollars traded hands. This talk reviews the role of mathematics in finance, the assumptions on which mathematical models for finance are built, and the history of use and misuse of these models. (Received September 17, 2010)