Calculating Risk

"Any tool that can give us a clearer understanding of risk in financial investments will be an improvement."

—A conversation with Professors Lucia Kimball, Victoria Steblovskaya and Norman Josephy, *Department of Mathematical Sciences, Bentley University*

However you define it, risk is pervasive in today's economic climate. Try defining it mathematically, as these three Bentley professors are doing. Their goal is to infuse a little more reality into financial models typically used by investors trying to hedge their bets—enabling them to better understand the inherent risks and possibly avoid another financial meltdown.

Isn't it fair to say that high risk is unavoidable in today's market? **LK:** You can manage the risk, though, and that's what we try to do, particularly in the area of hedging strategies. We're developing a tool to better understand the nature of the risk and the consequences of investing in certain financial instruments.

Can a mathematical model really help? **NJ:** As the statistician George Box is credited with saying, "All models are wrong, some models are useful." Our goal is to infuse a little more reality into a classical financial model—and make it more useful.

A new and improved version? **VS:** One of our model strengths is its flexibility in accounting for different risk factors that influence financial investment decisions. Our approach provides an investor with a tool to more fully balance multiple risks and return.

Aren't mathematical models partly to blame for the financial crisis? **NJ:** Any tool that can give the investor a more accurate understanding of the risks will be a tool that should be developed. Whether it is used ethically is another question—and an important one.

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