Derivatives don't deserve their bad name, says Jennifer Conrad, the McMichael distinguished professor of finance at UNC Kenan-Flagler.

Yes, they may have contributed to the current economic crisis, as investment banks loaded up on mortgage-related derivatives that neither their traders nor risk managers fully understood. Yes, they had a role in the mid-'90s collapse of England's Barings PLC, where a trader used them to bet heavily—and wrongly—on the direction of the Japanese stock market. And, yes, they helped along the 1994 bankruptcy of Orange County, California, where they bamboozled the local treasurer.

But those debacles obscure the practical ways that many stable companies use derivatives daily to hedge risks, Conrad says. In a recent study on worldwide derivatives use, Conrad and two co-authors found that, on average, corporate derivatives investors in the late 1990s and early part of this decade were older, larger firms that were more exposed to exchange and interest-rate risk than other companies. They tended to operate in commodities-based industries like oil production and agriculture. In other words, they might have been roughnecks, but they weren't rogues.

Conrad did the research with Greg Brown, who's also a Kenan-Flagler finance professor, and Sohnke Bartram, a professor of accounting and finance at England's Lancaster University. They examined nearly 7,000 nonfinancial firms headquartered in 47 countries. Conrad says that the heft of their dataset gives their conclusions greater weight.

The study, titled, "The Effects of Derivatives on Firm Risk and Value," found that derivatives allowed users to damp a variety of risks and—even more striking—helped them to weather the 2001 global recession better than many firms did. Simply put, derivatives investments appeared to make these companies *less* risky than average. "Hedging with derivatives is associated with significantly higher value, abnormal returns, and larger profits during the economic downturn in 2001-2002, suggesting firms are hedging downside risk," they write.

"Our results suggest, at a minimum, that firms reduce cash-flow risk, total risk and systematic risk significantly through financial risk management with derivatives," Conrad and her co-authors add. They thus conclude that, "On average, firms are hedging rather than speculating with derivatives."

Derivatives are, as their name implies, financial instruments derived from underlying assets, indices or even other derivatives. Their most common forms are forward contracts—known as futures if they're traded on exchanges—options and swaps. A wheat grower, for example, might use a futures contract to lock in a price for its grain and thus protect itself from a plummeting market between planting and harvest.

The three scholars' findings square with what logic and stories from the field had suggested for years. As a professor, Conrad had discussed with her students the many practical ways that firms might use derivatives and offered up examples of these uses in action. But until this study, she hadn't verified whether those anecdotes were exceptions or the rule. Just because, for example, Southwest Airlines managed to use derivatives for years to hedge away the risk of rising fuel prices didn't mean that other firms did. Others might have been speculating.

Derivatives skeptics certainly believed that many users were rashly betting, not prudently hedging. As billionaire investor Warren Buffett had famously put it, “Derivatives are financial weapons of mass destruction.”

And derivatives do resemble deep water or dark caves—they’re scary insofar as they’re mysterious. Many people, even otherwise canny investors, don’t take the time to understand them—they’re complex and can be mathematically knotty—and thus people hear about them only when a big investment goes horribly wrong and hits the pages of the popular press.

But corporate financial executives and sophisticated traders use them in mundane—and helpful—ways every day, Conrad points out. The most obvious technique is the hedging that Conrad, Brown and Bartram document. Here, multinationals might employ swaps to protect their profits against swings in the values of the currencies in the countries in which they operate. Or hog producers might invest in pork belly futures—bellies are the source of bacon—to protect themselves against sinking pork prices. “If you can use a derivative to lay off some risk, that can be a good thing, and perhaps you should consider it,” Conrad says.

Another derivative use is what might be called prudent speculation. Here, an investor might buy a derivative not to gamble but in hopes of profiting from her specialized knowledge of a specific corner of the market or development in the economy.

“Speculation has a pejorative ring to it,” Conrad says. “But when you buy a hundred shares of IBM, you’re speculating that IBM is going to go up. The derivative markets just provide another vehicle for people to impound their information into the market.” By bringing their knowledge forward in the form of derivatives trades, these investors allow the market to allocate resources more efficiently than it otherwise would.

A third use of derivatives is arbitrage, where investors aim to profit from exploiting price differences between markets. Derivatives are another tool that arbitrageurs use to try to profit from the anomalies that they identify.

Interestingly enough, the sort of hedging that Conrad, Brown and Bartram highlight has long been as controversial among finance scholars as derivatives are among members of the general public. Some academics argue that companies shouldn’t hedge but instead should devote themselves single-mindedly to their core businesses. Investors can hedge on their own by buying derivatives or other securities when doing so serves their purposes, these thinkers say.

Conrad, for her part, doesn’t find that argument convincing and considers hedging a legitimate tool for corporate managers. “There’s a real question about whether individual investors can do this kind of risk reduction on their own,” she points out. “Trading in derivatives is difficult. Transaction costs might be too high, and [individual] investors might not have adequate information to hedge the risks that the firm faces.”

For evidence of the perils for ill-informed folk, one needs to look no further than Orange County, Calif. There, the county treasurer, Robert Citron, borrowed heavily and bought derivatives, even though, as a lifelong government worker, he had little expertise in them. When the market turned against his trades, Orange County was driven into bankruptcy—at the time, the biggest municipal financial failure ever.

Even shrewd Southwest Airlines doesn't always profit from its derivatives trades. As fuel costs fell over the second half of 2008, its hedges against higher oil prices ending up costing it money, resulting in its first loss in 17 years.

So, yes, derivatives can be perilous, even for experienced users, but "they aren't evil," Conrad concludes. "To the extent that you believe that firms are doing the right thing in reducing some types of risk, then derivatives are useful."