# BY THE NUMBERS

**Summing up the career of one of SIUC's most distinguished**
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*by Marilyn Davis*

**The current economic crisis,** which has snaked its way from the United States to Europe, Asia, and even the Middle East, has demonstrated just how interrelated financial markets are.

But that came as no surprise to Ike Mathur, an internationally known finance expert who grew up in Pakistan, came to the United States for his education and career, has held Fulbright professorships in Finland and Portugal, recently organized a conference in Norway, and is editing a journal based in Amsterdam.

Mathur, professor emeritus of finance at SIUC, specializes in banking, corporate finance, and international finance. His research has looked at these topics in almost every region of the globe. Many of his studies have analyzed the effects of one nation's market developments on those of other nations or regions.

Mathur came to SIUC in 1977. Besides teaching and doing research, he's served stints as the chair of the finance department and interim dean of the College of Business. He was named the college's Researcher of the Year in 1995, 1998, and 2006. He's written or co-written 14 books and more than 100 articles with dozens of collaborators, from graduate students to colleagues in the United States and abroad. He's also edited several finance journals.

He retired at the end of 2007, but only in the technical sense. He continues to teach courses and do research, and in January 2008 he became managing editor of the *Journal of Banking and Finance,* an international research publication rated among the top five finance journals.

Mathur earned his doctorate in marketing. But a research assistantship with a finance professor late in his doctoral coursework swayed his interests. After graduating, he did research in both fields, but slowly shifted toward finance.

"What I really liked about finance was that it had no softness in it," he says. "If you want to advertise a particular product, do you do direct mail, door-to-door sales, TV, radio? There's no optimal answer; it depends on the circumstances. Finance, I found, was just like mathematics: mostly there are very concrete, objective answers to particular problems, and I found that intriguing. If you're doing good work in finance, you need a good support field in mathematics."

Mathur has worked with SIUC mathematician Salah Mohammed, for instance, in the area of option pricing, the right to buy or sell some asset. Say you have a car for sale for $5,000. An interested buyer might want you to hold the car for her for a couple of days so she can check out other cars. But that denies you the chance to accept another offer in the meantime. So the prospective buyer offers you a $200 premium for the option to buy the car within 48 hours. "It's mathematically rigorous, but there's a way we can figure out what the right price is for this option," Mathur says.

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Finance focuses on managing funds, deploying assets within and across national boundaries, and raising money in different financial markets. "We look at best practices to develop theories for prescriptive strategies for firms," Mathur says. Some of that knowledge is passed along via consulting. But the biggest influence on corporations, Mathur says, "is the way we teach finance theory to students and they implement it as they move up the ranks."

He adds, "Many of the concepts we work on in finance have filtered over to accounting, marketing, and management." About three years ago, in fact, he edited a special issue of the *Journal of the Academy of Marketing Sciences* about the interaction between marketing and finance.

"Thirty years ago, the chief corporate goal was to maximize profits," Mathur says. "Today, not a single CFO would say that. They would all say the goal is to maximize shareholder wealth," which is not necessarily the same thing. "Many studies in marketing now focus on maximizing shareholder value, which is something we deal with in finance all the time."

Maximizing shareholder wealth is better for society, Mathur says: "Shareholders can better pursue their goals." For some, that means purchasing consumer goods, but for others it also means giving to charity. Maximizing shareholder wealth maximizes social welfare in the United States and other countries as well, Mathur argues.

"Every year *Forbes* magazine does a survey of how much people have in terms of wealth and how much they're giving away. What I find interesting is how many people there are who are giving 60, 70, 80 percent of their wealth to charity."

After a nearly 40-year career, Mathur ranks among the top 100 finance professors globally for publications. That seems fitting, given his strong interest in international finance.

"One strand of my research deals with how institutions internationalize," he says. "The conventional wisdom is you either go overseas and start from the ground up or you buy foreign institutions. But strategic alliances and joint ventures are generally more successful and profitable modes of expansions into foreign markets. You can limit your capital investment and you're able to look for complementary skills or assets." U.S. firms, he explains, have the technology and the managerial and production experience, while foreign firms have the local resources and the all-important connections.

In the mid-1980s the People's Bank of China invited Mathur to give some lectures for senior managers. At the time, U.S. businesses could go into China only by way of joint ventures. "That got me interested in joint ventures, because the average U.S. manager wasn't well versed in Chinese culture and how to build connections," Mathur notes. The experience resulted in one of his 14 books, *Strategies for Joint Ventures in the People's Republic of China,* co-authored with Chen Jai-Sheng, a member of the bank's board of directors. (Mathur's other books

include several on European finance and a number of textbooks.)

Mathur and two co-authors received the 2006 Outstanding Article award from the *Journal of Financial Research* for their study "The Use of Acquisitions and Joint Ventures by U.S. Banks Expanding Abroad." Joint ventures have turned out to be a "great way" for financial institutions to expand their reach, he says.

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Much of Mathur's work tests and develops financial models. Take capital asset pricing, a longstanding finance tool based on the assumption that there's a direct relationship between risk for a particular type of investment (the risk measure is called beta) and the investment's expected return. A beta of 1 represents average risk; higher beta values represent higher risk but also higher expected returns. The model calculates beta and prices assets so that risk and return should be in equilibrium.

In 1992, however, two researchers argued that beta in fact wasn't a good indicator of risk—that there was no relationship between beta and returns.

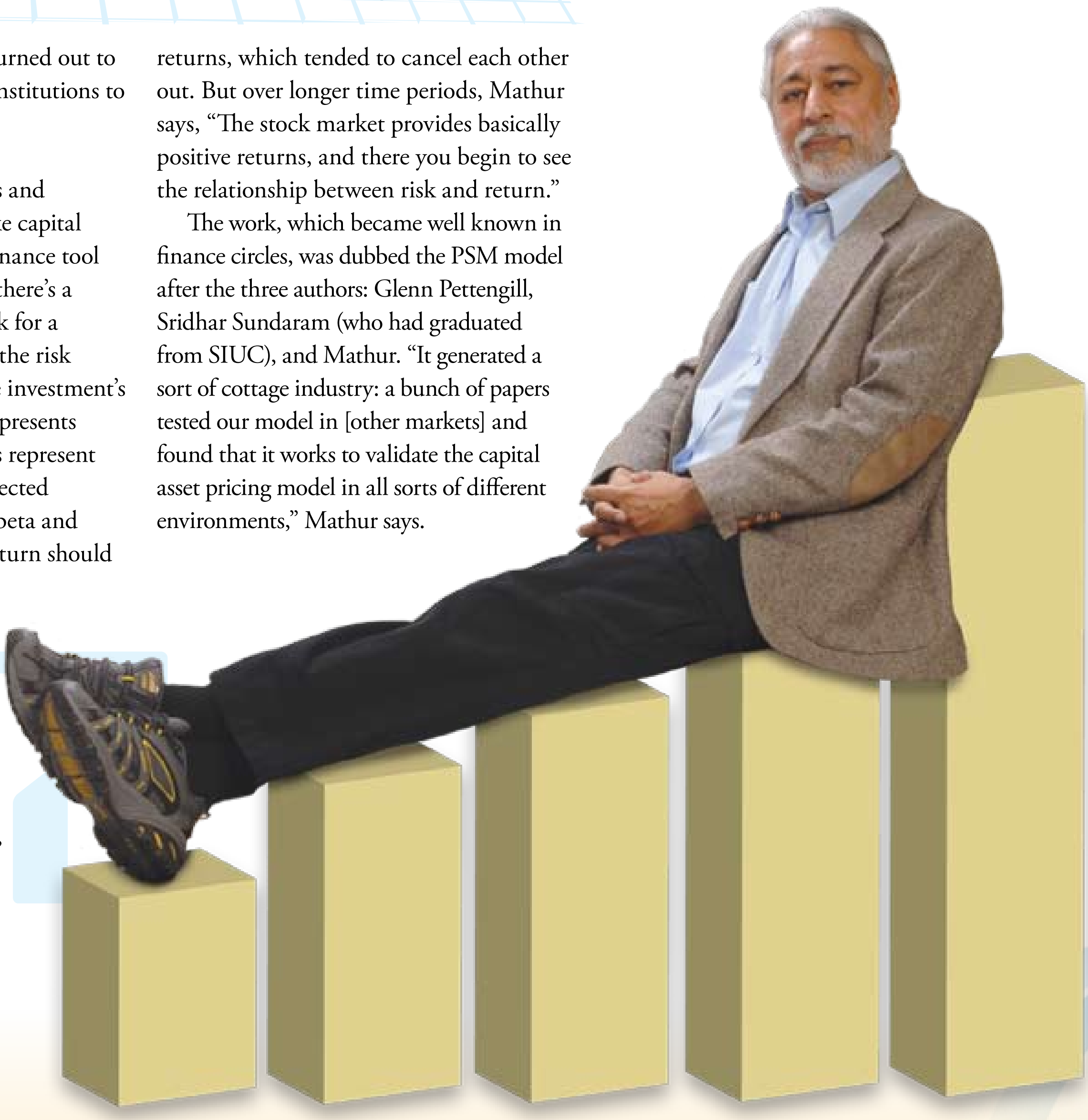
"Something seemed not quite right about the research," Mathur says. "In 1995 I and two other people set up a model with a historical context, and when we tested it with historical data (using longer time returns than the previous researchers used), it showed that capital asset pricing does have validity."

The previous researchers used monthly returns, which tended to cancel each other out. But over longer time periods, Mathur says, "The stock market provides basically positive returns, and there you begin to see the relationship between risk and return."

The work, which became well known in finance circles, was dubbed the PSM model after the three authors: Glenn Pettengill, Sridhar Sundaram (who had graduated from SIUC), and Mathur. "It generated a sort of cottage industry: a bunch of papers tested our model in [other markets] and found that it works to validate the capital asset pricing model in all sorts of different environments," Mathur says.

Another interest of Mathur's is developing models to put a value on human life. The idea sounds abhorrent—yet juries are asked to make awards for loss of life and need a means to do so. "The conventional wisdom is that we can't place a value on life. When it comes to [the people we love], we would say that their value is priceless," Mathur says. "But we can look at the costs and benefits involved in consumption activities, the riskiness of occupations, and so forth, and can actually assign values to those."

Mathur was only the second person in the nation to give testimony in court in this area. Based on his "loss of value of life"



report, a settlement was awarded to the family of a woman who died in a car crash. "Since then I've testified many times as an expert witness on the value of life," he says. "I do a lot of personal injury and medical malpractice work as a consultant."

Financial models generally incorporate risk aversion as part of the equation. "But what if for some time our behavior is not rational? What happens if we're not risk-averse?" Mathur says. Such behavior on the part of consumers and financial institutions resulted in the high-tech stock market bubble that burst in 2000, and the recent subprime mortgage morass, which has ballooned into a lending crisis across the globe.

"In the last few years [the field has] started to focus more on what we call behavioral finance," Mathur says. "People have done that for a long time in fields like marketing and management." Finance researchers certainly have more to explore.

Some of Mathur's recent theoretical work has implications for the current economic crisis. A model he developed recently with British researcher Shahid Ebrahim showed a dynamic, two-way interaction between interest rates and housing prices. "Now we're looking at organizational forms in real estate financing," Mathur says. The most common are limited partnerships and real estate investment trusts (REITs, which are not subject to federal tax if 90 percent of the profits are distributed to shareholders). But he and Ebrahim found that "the optimal form for organizing real estate is an UPREIT: an umbrella partnership real estate investment trust, which combines the most desirable features of the other two."

Their findings, he says, "suggest that subprime mortgages and defaulted properties should be placed within the framework of an UPREIT, and that would be the fastest way out of this current mess."

**Because the government has begun taking action, Mathur is more optimistic about the current financial crisis now than he was in spring 2008.**

That may be an idea ahead of its time. So what will happen instead? "Setting aside money for buying back subprime mortgages is probably the wrong way to go," Mathur says. "The best way to increase liquidity in financial markets is to inject equity into the banking system. Banks can make more money and lend more money by expanding their assets base." At the time of this writing, the Treasury Department was beginning to do that by buying preferred stock in the nation's nine biggest banks, to the tune of $125 billion, with another $125 billion slated for large regional banks. The rest of the $700 billion bailout was still not settled.

Mathur is actually more optimistic about the situation now than he was in spring 2008. "I don't think we will gravitate toward a 1930s-type depression," he says. "The federal government is better equipped now to handle [a crisis], and there's better cooperation among central banks. [Investors] don't like uncertainty, and government action is reducing uncertainty. If you're going to be in the stock market for another five to 10 years, you'll probably be OK, and [some people will want to make] judicious investments in the market now."

By the time this magazine reaches your mailbox, who knows what the Dow Jones average will be. But one thing is certain. Finance professors like Mathur will be watching, analyzing, and modeling—and sharing what they learn with a new crop of students.

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