Inna Rozel might be obsessed with money, but don't get the idea that she is a greedy or narrow-minded person. She isn't. It's just that Rozel is one of a growing number of IT grads who are launching their careers in the financial services industry.

The financial services market encompasses an array of companies spread across many different types of businesses, including banks, brokerages, credit card issuers and mortgage providers. This diverse industry requires experts who are skilled in the complete gamut of IT specialties, including programming, operations, databases, systems design and analysis, networks and telecommunications.

Rozel, for instance, is a business analyst for Chase Home Mortgage in Edison, N.J. "My responsibilities include gathering requirements, translating user needs into functional and technical specifications and managing small projects and initiatives," she says. Rozel also creates various types of in-house tests and represents users' interests on various IT projects and initiatives.

Since financial services companies must handle great quantities of numbers and documents in a variety of different ways, they have historically been among the earliest and eagerest IT adopters. "We use technology to minimize costs," says Gary Simms, operational risk management director for Freddie Mac, the U.S.-government chartered company, located in McLean, Va. The company helps keep money flowing to mortgage lenders that support the home and rental housing markets. "If a technology can help make us more efficient and lower costs, we'll adopt it," says Simms.

Like most major financial services companies, Freddie Mac employs an army of IT specialists. "We have over 2,700 technology employees spread across the country," says Simms. That's out of total workforce of about 5,200 people. Simms notes that Freddie Mac's IT workforce focuses on four basic areas: software development, infrastructure management, database management and technical project management.
When hiring new IT workers, Freddie Mac seeks grads with various types of skills, but nothing too specialized. "We mostly look for development capabilities," says Simms. "We look for C++, Java, WebLogic, COBOL, HTML, SQL, UML and various other development skills." Additionally, Freddie Mac gives preferences to candidates with what Simms describes as "soft skills."

"We also look for the ability to comprehend technical platforms, operating systems, basic system security principles and network architectures," he says. Simms adds that job candidates should also possess a set of basic business skills, including the ability to coordinate and monitor work, interact with a diverse workforce, communicate effectively, and work in their own area with minimal supervision. "Rather than one specific talent, we look for an entire range of skills in the people we consider for employment," says Simms.

Rozel was hired by Chase directly out of college, where she earned a B.S. in computer science. "Doing IT at a financial services company seemed to be a great opportunity to apply the basics of technology that I had learned in college," she says.

Over her 10-year career at Chase, Rozel has steadily worked her way up the ladder, progressing from entry-level programmer to project manager and business analyst. Like many financial services IT workers, Rozel recently decided to advance her career by adding a graduate degree to her resume. She now has a master's degree in management of technology in financial services from New York's Polytechnic University. "I would like to use the knowledge I acquired in the master's program to look at and assess the bigger picture in my future assignments and endeavors," she says.

**Growing Trend Toward Combined Education**

A growing number of colleges and universities are beginning to offer courses and programs that are focused on financial IT. Polytechnic University, for example, offers a master's degree in financial engineering, as well as the management of technology in financial services. The University of California at Berkeley, Kent State College, Claremont Graduate University and Princeton University are among the many other schools offering similar graduate-level programs.

Given the fact that IT plays such an important role at financial services, it's only natural that there's a growing trend toward combined technology and finance education, says Bob Biolsi, a Polytechnic University adjunct professor and vice president of quantitative analysis at the New York Mercantile Exchange.

"Traditionally, finance was taught in the abstract and certainly not in combination with technology management," he explains. "The current demand is for IT people with some knowledge of finance theory and practice, and for finance people who have the skills to manage the technology process."

Biolsi believes that a new generation of trained financial technology specialists will help the industry correct some of its past IT mistakes. "Finance people had difficulty communicating their technology needs while IT departments built systems that really didn't understand what was expected of them," he says. The two sides, working in near isolation, wasted both time and money. "Tens of millions of dollars were spent without accomplishing what was truly needed by the industry," says Biolsi.
Ron Thompson, an associate professor of information technology at Wake Forest University's Babcock Graduate School of Management, located in Winston-Salem, N.C., sees a growing overlap of financial and IT interests at the graduate level. He believes finance students are taking IT courses and more IT students are studying finance. "It's becoming quite common for finance students to learn some Visual Basic programming so they can build decision support systems using Microsoft Excel as the platform and Visual Basic for the logic," he says. "On the flip side, for IT students who want to work in the financial services industry, it's helpful to have a basic understanding of financial accounting and basic financial industry regulations and practices."

Rozel asserts that financial IT can be a fascinating and fulfilling career. "Starting as a programmer, I was able to observe how the whole development cycle works and, from that, I was able to move up to the tasks that would build on my existing skills and help me develop new abilities," she says. "Financial services IT is for those who are looking for a fast paced environment filled with challenges and overcoming obstacles in the most efficient manner."

John Edwards is a technology writer based near Phoenix. His work has appeared in CIO Magazine, Wireless Week, Mobile Computing, IEEE Computer and numerous other publications.

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