Upon arriving in the United States, Bykhovsky recalled seeing Manhattan on a subway map. The borough’s name quickly conjured up his memories of the Manhattan Project, a research and development program that produced the first atomic bomb. He knew Columbia University had a role in the project’s beginnings, and he was determined to find the campus.

“In ’77, it was still the Iron Wall, so there was absolutely no information flow between the two countries,” Bykhovsky said. “Columbia picked me up as a 17-year-old kid, pretty much off the street, and gave me the opportunity to develop and learn.”

His determination to succeed led to earning a BS in applied physics from the Engineering School and an MS in physics from the University of California at Los Angeles.

Bykhovsky’s solid scientific background proved to be the launching pad for his career in finance. He got busy building mortgage analytics systems for Wall Street businesses like Hyperion Capital Management and Prudential Securities. He realized, though, that there weren’t high-quality commercial models available that could generate sufficiently accurate mortgage projections. So, in 1996, he started a company that could: Applied Financial Technology.

Bykhovsky’s software connected macroeconomic scenarios such as home prices and interest rates as well as mortgage holders’ projected behaviors. In turn, the company could calculate the mortgages’ values as well as other derivatives.

“Quantitative training is probably the most important thing in quantitative finance, and that’s what I did,” he said.

Having built a mortgage database and a set of analytics, he asked his researchers to analyze what would happen if U.S. home prices stopped increasing.

“I got convinced enough that the whole thing would collapse, so I sold the company in 2006 before it did,” Bykhovsky said.

He’s also used his financial smarts while sitting on an economic advisory board for U.S. Rep. Jackie Speier of California. Bykhovsky pushed for refinancing of Fannie Mae and Freddie Mac loans with no questions asked and explained that by allowing lowered payments, “we would definitely not increase the defaults; quite the opposite would happen.”

After many attempts, the new regulation by the Federal Housing Finance Agency passed in late 2011.

Nowadays, the San Francisco–based Bykhovsky continues to act as an academic and economic adviser. He mentors a technology start-up that includes Columbia Engineering faculty and students. He also keeps active as a member of the School’s Board of Visitors and the Engineering Entrepreneurship Advisory Board.

“What distinguishes Misha from many other highly successful entrepreneurs is his passion ... to share with others what he has learned and help them become successful entrepreneurs,” said Steve Perlman ’83, Bykhovsky’s friend since freshman year and CEO of Radian Corporation.

While Bykhovsky encourages his four children, with his wife Charo of 17 years, to find their own life’s mission, he would be delighted if they landed at Columbia.

“Without Columbia I most likely wouldn’t be who I am today,” he said.