



Finance offers intellectual challenges and economic rewards

More and more scientists are finding stimulation, fulfillment, and pecuniary rewards in the financial sector.

Paul Smaglik

Ian Smith was intrigued enough by the intellectual allures of the stock market that he abandoned basic science. Michael Steinmetz noticed that his pharmaceutical employer was spending less on research, so he left to launch a fund that would support more. David Shaw decided he could make a better living in investment than research.

Christopher Evans traveled from a postdoc post in Canada to stints as a UK biotech pioneer, to head of a biotech venture-capital firm. Roger Wyse traveled from a government scientist position to dean of two life science departments, to investment bank 'rainmaker'. Jesper Zeuthen shuttled between academic and industrial labs while consulting for a bank before finally joining the bank full-time.

These scientist-financiers found as many reasons to leave research careers as they discovered routes to depart. But their collective tales reveal shared themes as well. All had little or no formal finance training. All say that the intellectual joys of analyzing a variety of companies, affixing values on them, and deciding whether or not to invest in them outweighs being narrowly focused on one scientific project, or being weighed down with the management tasks that inevitably burden a mid-career scientist in both academia and industry. And all would admit that the money is not bad either.

Moves into finance from both academic and industrial research are not just becoming more common, they are becoming more accepted in the scientific community. That was not always the case. Smith, managing director of Lehman Brothers Pharmaceuticals Research, considered by many to be the first basic researcher to make the switch from bench to bank in the mid-1980s, recalls that some colleagues perceived his decision to give up a basic-research position at SmithKline Beecham (now GlaxoSmithKline) to join Lehman Brothers in London as "traitorous." Now scientists generally hold a "more enlightened" attitude about alternative careers in general, and towards finance in particular, he says.

He finds his finance position more stimulating than bench work. "The biggest intellectual challenge is placing value on companies—particularly loss-making biotech com-

panies—and predicting the likelihood of their products going to the market," he says. He also likes the variety. "In many ways, it's a much more exciting environment than being in the pharmaceutical industry, because you get to see a diversity of scientific problems." He recommends that people considering a career in life-sciences finance spend some time in biotech or pharma first.



Managing director Ian Smith finds finance more stimulating than bench work.

Learn as you go

That advice holds true for Steinmetz, a general partner with MPM Capital in Cambridge, Massachusetts, who gradually attained business acumen while advancing his scientific career. After a biochemistry postdoc at the California Institute of Technology, the European native joined the Basel Institute for Immunology. While there, he received funding from Roche and got to know the company's head of global research, Jürgen Drews, who convinced Steinmetz that joining Roche would allow him to have broader scientific interests and to translate his basic work into practical applications.

When the company acquired Genentech in 1990, Steinmetz moved to New Jersey to run preclinical research and development for Roche in the United States. He was also responsible for Roche's global biotech efforts and forged several deals, among them Roche's collaboration with Millennium, where he joined the board of directors. But Roche, like other pharmaceutical companies going through tumultuous periods of mergers and

acquisitions, began to reduce and restructure more and more of its drug research. So Steinmetz decided to use his long-held scientific background to evaluate his newer area of interest, biotech companies.

He says that it is easier for a scientist to learn finance than for someone with standard business training to learn science. He has used his knowledge to help set up two biotech-heavy funds—both worth hundreds of millions of dollars. He calls his work "exciting" because it puts him in touch with scores of scientists and startup companies trying to redefine the cutting edge. But he cautions that there are probably not hundreds of full-time finance positions available for PhD scientists now. About 15 professionals at MPM manage \$800 million in investments.

Shaw, president of DE Shaw, a private New York investment bank, agrees that opportunities are limited at the moment; he estimates that the firm receives about 400 applications for every opening. However, as technology becomes more complicated, he expects larger investment banks to hire more scientists, engineers and mathematicians.

Shaw did his PhD at Stanford in artificial-intelligence research and served on the faculty at Columbia University but realized when he wanted to start a family that he would need to make more money if he wanted to remain in New York, so he joined Morgan Stanley as an analyst. However, his academic bent kept him from remaining there long term. He was curious to see if his theoretical musings had any real-world application. "There was a tremendous intellectual challenge, as it was widely regarded to be impossible to use mathematical techniques to beat the market systematically," he says.

He started DE Shaw, which he calls a 'research enterprise' in part to find the answer. The company's success in using math and statistics to look for stock-market opportunities has allowed the company to carry that label legitimately. In carrying out both financial and technological activities, he hires a "disproportionate" number of PhDs. As a result, the firm differs from more buttoned-down Wall Street houses. "The place doesn't look like an investment bank," he says.

Evans is all for bucking tradition. He, like Shaw, is unapologetic for opting out of academia to make money. One of the benefits of

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David Shaw uses math and statistics to look for stock market opportunities.

success, he says, is driving his children around the country in a Rolls Royce, blasting Black Sabbath. He also enjoys using his scientific background to make better investment decisions and his investment successes to support new scientific endeavors. After launching several companies, including Enzymatix and Chiroscience, the Welshman started Merlin Ventures, a fund that supports a broad array of biotech.

That company employs about seven or eight PhDs to analyze the science the company funds. Evans, like Shaw, believes that scientists do a better job of evaluating biotech than someone with traditional business training. Evans predicts that as multidisciplinary science begins to bring products to market, there will be a need for scientists with more diverse backgrounds to evaluate them.

Pros and cons

Evans finds his company gratifying because the companies it funds may bring therapeutics to people who need them—Merlin-funded companies have about 110 medicines in trials. The venture also provides jobs for scientists.

Wyse, the managing director of Burrill and Co., a private merchant bank, says that in function if not output his last academic position—dean of the University of Wisconsin's College of Agriculture and Life Sciences—does not differ dramatically from his new one. "Deans spend a lot of time raising money," he says. "We spend a lot of time raising money. Deans invest in good, bright people. We invest in good, bright people." However, there are some differences. "The bottom line here is you've got to make money," he explains. In academia, new thoughts and excellent science count for more. In investing, good but not great science that has wide commercial promise trumps stellar science with esoteric applications.

He notes that scientists at different stages of their career are of different value to investment firms and, consequently, require differ-

ent levels of additional training if they expect to be hired. Newly minted PhDs—who, he says, the firm does consider—may be well served in getting some finance training, or starting out as analysts with a smaller firm.

Zeuthen, managing director of BankInvest in Copenhagen, slipped gradually, almost seamlessly, into investment banking. After a PhD in molecular biology from the University of Copenhagen and a postdoc at Stockholm University, he joined Novo Nordisk, because academic research in Denmark was poorly funded at the time.

In time, he found himself doing less science and more management. After seven years, he happily responded to an offer to start up a new lab for the Danish Cancer Society. Within a few months of taking up that post, he agreed to start consulting for BankInvest, which was considering starting up a fund based on the biotech boom in the United States.

As the years passed at the Danish Cancer Society, he again found himself doing less science and more management. So last year, he was tempted when he received an offer to join BankInvest full time. When he consulted for the bank, he handled the technical evaluations of prospective investments, while others looked at companies' financial strengths. But after years of consulting, he found he had learned a lot of the business nuances. Now he's happy he made the switch. "What I like about



Michael Steinmetz has used his scientific knowledge to broker biotech funds worth hundreds of millions of dollars.

the venture business is the hands-on opportunity," Zeuthen says. "It's more hands-on than being a middle manager."

The position does have its downsides, however; investment is much more intense. He's not sure he could hold this position as long as he could a university one. "If I had stayed in academia, I could have continued like that until I reached 90," he says. But he's not sure he would have wanted to.

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