



The Jerome Fisher Program in
Management & Technology

Fisher Program in Management and Technology Alumni Spotlights



"What my firm does is apply statistical models through giant computer programs to try to make money in the investing field, so it's pretty much the embodiment of M&T."

- Dr. Clifford Asness, M&T 1988

When people think of combining business and engineering, the M&T program's mantra, high-tech startups like those in Silicon Valley usually come to mind. However, one M&T alumnus has fused finance and computer science in another way, harnessing the power of advanced computer trading models to make money in financial markets around the world. His name is Clifford Asness (M&T 1988), and the investment firm he co-founded and manages, Applied Quantitative Research (AQR), has become one of the largest hedge funds in the world with over \$13.5 billion under management. Asness is not your typical hedge fund manager. While many hedge fund managers are secretive and serious, Asness is open and funny. While many managers use gut instinct to make investment decisions, Asness follows a more cerebral approach, gathering evidence and testing hypotheses. With a knack for numbers and love of finance, it seems only natural in retrospect that Asness ended up in the investing field, but before coming to Penn, Asness always thought he would become a lawyer like his father. It was his M&T experience that helped put him on the path to becoming one of the leading investment experts in the world.

Finding His Path

Asness first found out about the M&T program from his father, who read about it in a magazine. Attracted by the diverse options the program provided—such as pursuing a career in business, engineering, or a combination of the two—Asness applied early decision and was accepted to the program.

At Penn, he majored in Finance and Computer Science, earning a Bachelor of Science in Economics from Wharton and a Bachelor of Science in Engineering (BSE). Completing the BSE typically took five years, but he finished it in only four with the help of his advanced placement credits and by taking five to six courses a semester. Despite the heavy course load, Asness graduated *summa cum laude*. Self-described as a somewhat "disinterested" student in high school, Asness's passion for learning was ignited by his Penn courses, especially those in finance. One finance experience in particular changed his career aspirations forever: working as a research assistant to a group of finance professors, Stephen Zeldes, Andrew Lo, and Michael Smirlock.

Asness credits getting the coveted research assistant job to the engineering skills he gained from the M&T program. Many Wharton students wanted the job, but the professors needed someone who could "spin computer tapes and extract data," and Asness, as a computer science major, could do exactly that. Working with the professors helped Asness discover an interest and affinity for research in finance, specifically in portfolio management, which led him to follow in his mentors' footsteps and pursue a PhD in the discipline. His research experience helped change his mind about attending law school after college. "This experience really led me on the path to academic finance," he said. His father also helped sway him to study finance over law, telling him, "Not many lawyers can do this quantitative stuff; a lot of quantitative people can do this law stuff."

His engineering skills would prove invaluable time and again in helping him land jobs in finance by giving him an extra edge over other applicants who only studied business. "Not a lot of people use a little bit of finance to get into a computer programming job, but it happens to work the other way quite well," Asness recalled. "There are a lot of people in business who need a programmer or someone with other engineering skills, so M&T opened a lot of doors for me." His computer expertise helped him get all of his summer internships while at Penn, which were about "one-third finance, two-thirds computers" work.

From PhD to AQR

After graduating from Penn, Asness went straight to graduate school at the University of Chicago. There, he studied under one of the leading financial thinkers in the world, Eugene Fama, and even became Fama's teaching assistant. At Chicago, both Fama and Asness made discoveries that helped challenge the longstanding belief that the stock market is perfectly efficient, i.e., all relevant information is already built into stock prices. Fama found that value stocks (stocks whose prices are low relative to the companies' earnings) outperformed growth stocks (stocks with high prices relative to earnings) more than two-thirds of the time. For his doctoral thesis, Asness found that momentum trading worked better than it should if markets were perfectly efficient. While working toward his PhD, Asness picked up an MBA concurrently and began working at Goldman Sachs, where he started as a portfolio manager and traded mortgages in the fixed income (bonds) group. When he completed his dissertation, Asness was trying to decide between working in academia or Wall Street when he received a very attractive job offer from a "big West Coast bond manager." The bond manager had read one of Asness's research papers published in the *Journal of Portfolio Management*, one of the most prestigious journals in finance and investing, and offered Asness the chance to start a quantitative strategies group on the West Coast. The group would apply the latest academic financial research, like Asness's findings, to make money in the financial markets. When Asness told Goldman he was resigning, the company offered him the chance to start the exact same type of group at Goldman. Ultimately, Asness accepted Goldman's offer because his family lives in New York. At Goldman, Asness combined his momentum trading findings with Fama's value investing findings, buying value stocks with positive momentum and short selling growth stocks with negative momentum. With that guiding principle, Asness's group delivered high returns in their first few years, even doubling their money in one year. After only two years, Asness's team was already managing \$7 billion, and they barely had a month in which they lost money. In November 1997, Asness decided to leave Goldman and start his own hedge fund, based on the models he used at Goldman, with three other founding partners, people he worked with at Goldman. Within five months of launching their hedge fund, AQR, they already raised \$1 billion, which was believed to be the largest amount ever raised by a start-up hedge fund at the time, according to the *New York Times*.

Today, Asness and his team make money by applying the latest financial research to finding and capitalizing on inefficiencies in financial markets around the world, an interdisciplinary task that M&T prepared him well for. "What my firm does is apply statistical models through giant computer programs to try to make money in the investing field, so it's pretty much the embodiment of M&T." AQR is also widely diversified. For example, Asness and his traders usually buy and sell blocks of 400 stocks at a time, buying the 400 most undervalued and selling short the 400 most overpriced.

"From Excellence to Eminence"

In her inaugural address last year, University of Pennsylvania President Amy Gutmann listed raising Penn's profile, "from excellence to eminence," as one of her goals. She could well have been describing Asness, who has always been a standout researcher and investment manager and who is now receiving much media attention. Last year, Asness was invited to write an article for the 30th anniversary of the *Journal of Portfolio Management*. The list of authors is a veritable who's who of leading investing experts and researchers. Among them were Jeremy Siegel, Wharton finance professor and author of the best-selling *Stocks for the Long Run*, and Andrew Lo, director of MIT's Laboratory for Financial Engineering and for whom Asness served as a research assistant. Asness's inclusion in such an elite group shows he has reached the upper echelons of the financial and investing worlds. He is unique among hedge fund managers in that he is both a highly successful fund manager and a widely respected researcher in the field.

Asness was also featured prominently in the June 2005 *New York Times Magazine's* cover story on hedge funds, which profiled Asness and described the rise of AQR.

Words of Wisdom

Looking back, Asness modestly attributes much of his success to good fortune. "I don't think enough people who are successful give enough honest credit to luck along the way," he said. For example, he almost became a lawyer and would never have considered a career in finance had it not been for some pivotal experiences at Penn. Another important factor in his success was preparation, and he credits M&T with giving him a solid foundation for the work he does today.

For students interested in pursuing a career in investing or hedge funds, Asness cautions them against merely trying to find the next hot thing and recommends they find something they truly enjoy doing. "Reasoning from 'this is what's hot, so this is what I want to do,' I think you tend to be five to ten years behind the trend. Start out by asking, 'Do I find this interesting?' Whether something's lucrative or not certainly matters, but that can't be the only reason for doing it," advises Asness. He believes he would not have done so well at his job if he did not find it fascinating and intellectually stimulating. "What I became interested in I became good at, and it led to me doing very well," he said. His final piece of advice to M&T students is to tough out the challenges of the program because of the invaluable skills and knowledge they gain. "To me, the M&T program was worth the sacrifices," he said.

As more M&T graduates go into investing or hedge funds, they can learn much from this M&T trailblazer and leader in the field, Dr. Clifford Asness.