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MARKETS

At 78, Scientist Is Starting a Hedge Fund

'Quant' hedge fund would be launched later this year



George Zweig, one of the co-founders of Signition, a new quantitative hedge fund firm. *PHOTO: TIMMY HUYNH/THE WALL STREET JOURNAL*

By **JULIET CHUNG**

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George Zweig discovered the quark at age 26, assisted with a covert military operation during the Vietnam War and helped design one of the first cochlear hearing implants.

Now, at 78, he is starting a hedge fund.

“I’ve still got it,” said the wiry, white-bearded physicist as he leaned back in a chair in a Midtown Manhattan conference room. Mr. Zweig said he accepted this new challenge as he nears his ninth decade because “life can be very boring” without work.

While many people his age already have retired, Mr. Zweig is hunting for office space in Manhattan and asking for investor commitments to Signition LP, the quantitative hedge fund he and two younger partners, 40-year-old Shane Haas and 49-year-old Ravi Chander, plan to launch late this year. Signition is a play on words including “signal” and “recognition.”

“Quants” use mathematical analysis to find patterns in market data over a period of years, and Signition intends to raise hundreds of millions of dollars and trade thousands of stocks simultaneously in markets around the world using software that turns vast amounts of data into visual form. The aim is to find hidden patterns that can predict stock movements.

It is Mr. Zweig’s first foray into the hedge-fund world since leaving the famously secretive and profitable quantitative hedge-fund firm Renaissance Technologies LLC in 2010. He agreed when he left not to compete against Renaissance for four years.

Mr. Zweig is trying to become one of the oldest-ever upstarts in an industry where many founders are in their 30s and 40s, the hours are long and the chances of startup success are low. More than 1,000 hedge funds opened last year, according to research-firm HFR, while 864 closed.

Launching a new hedge fund is the latest of multiple reinventions for Mr. Zweig, born in Moscow to Jewish parents who emigrated to the U.S. shortly before World War II. He grew up in Detroit and earned a Ph.D. in theoretical physics from the California Institute of Technology.

Work he and another scientist conducted independently of each other suggested that protons and neutrons are made up of smaller particles known as “quarks.” The 1964 finding was initially dismissed by other scientists, but quarks have since come to be known as a fundamental building block of matter.

Mr. Zweig later migrated to government and academic projects that involved the search for signals amid noise.

He was one of a handful of academics to propose a system designed to stop the flow of troops and materials from North to South Vietnam by creating an electronic barrier consisting of sensors and mines. He eventually left the project amid his opposition to the war.

While teaching at CalTech he helped invent the algorithm that underpins cochlear hearing implants, electronic devices that can provide a sense of sound to the deaf. He also founded a company that leased software to the National Security Agency.



From left to right, Ravi Chander, Shane Haas and George Zweig, co-founders of Signition, a new quantitative hedge-fund firm. *PHOTO: TIMMY HUYNH/THE WALL STREET JOURNAL*

Mr. Zweig first turned to hedge funds as an investor while amassing a nest egg for his disabled daughter. In 2003, he interviewed for a job with East Setauket, N.Y.-based Renaissance, founded by former Cold War code breaker James Simons. Renaissance has achieved near-mythical status for the performance of its Medallion fund, which has averaged returns of more than 35% a year since the late 1980s through 2010.

After seven years at Renaissance, where he said he developed a system that allowed the firm to trade certain instruments for the first time, Mr. Zweig signed the noncompete agreement with Renaissance. Renaissance declined to comment.

The day after Mr. Zweig's agreement expired in 2014, Mr. Haas, an old acquaintance, pitched him on starting a fund reliant on quantitative strategies, they said. Mr. Haas earlier was part of such a group at Goldman Sachs Group Inc., trading Goldman's own money as part of a "proprietary trading" desk.

Many such funds lost significant amounts in August 2007 as they sought to sell similar

investments at the same time, but some have bounced back in recent years even as the larger hedge-fund industry has trailed total returns of the S&P 500.

Recently, established firms like Steven A. Cohen's Point72 Asset Management and Ray Dalio's Bridgewater Associates have been increasing the size of their quantitative teams or adding to their artificial-intelligence efforts.

Signition's founders aim to begin trading later this year. They declined to comment on whether any investor money had been committed yet but said they aren't using any ideas confidential to Renaissance or any of their prior employers at Signition.

"It's a fantastic challenge," Mr. Zweig said, of trying to create new quant strategies from scratch and finding order from the numbers and chaos in the markets.

Mr. Zweig acknowledged another motivation: He wants to keep working as a way of honoring those in his generation who didn't survive World War II. "It's a kind of survivor's guilt," he said. "I was fortunate enough to be given this opportunity to work, so I feel a special responsibility to not waste it."

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