Pequot Capital Management — a pioneering and well-connected hedge fund that gained fame for racking up years of strong returns — is shutting its doors amid a revived insider-trading probe

As recently as 2001, Pequot Capital Management Inc. managed about $15 billion, making it one of the largest hedge funds in the world. But in recent years, investors have shunned it, partly because of an off-again, on-again insider-trading investigation, including allegations that founder Arthur Samberg may have engaged in insider trading in Microsoft Corp. stock with the help of one of his then employees, who joined Pequot from the software giant.

Mr. Samberg, 68 years old, has strenuously denied any impropriety.

Late Wednesday, he threw in the towel. In a letter to investors, Mr. Samberg wrote: “Public disclosures about the continuing investigation have cast a cloud over the firm and have become a source of personal distraction.” Calling the situation “increasingly untenable for the firm and for me,” he said, “I have concluded that Pequot can no longer stay in business.”

The closure caps a half-decade of legal and public-relations headaches at Pequot, including the insider-trading probe, which eventually spawned Senate hearings that excoriated the Securities and Exchange Commission’s handling of the matter. In addition, a former SEC staff member told Congress he suspected John Mack, then a top executive at Credit Suisse, had tipped off Mr. Samberg about a merger deal.

The hearings proved among the most aggressive public airings of the internal workings of the SEC in recent years and helped set the stage for further congressional scrutiny of the agency, which recently came under fire for missing the massive Ponzi scheme perpetrated by Bernard Madoff.

The SEC has never brought charges against Pequot, Mr. Samberg or Mr. Mack. Mr. Mack, currently chairman and CEO of Morgan Stanley, also served briefly as chairman of Pequot.

The Pequot investigation was reopened late last year, according to Mr. Samberg’s letter, amid new questions about a $2.1 million sum that Pequot in 2007 agreed to pay to David Zilkha, the former Microsoft employee. That payment came to light last year as part of Mr. Zilkha’s divorce proceedings. Mr. Zilkha left Pequot in September 2001. A Pequot spokesman earlier this year said the payment was related to a civil claim regarding Mr. Zilkha’s employment. A lawyer for Mr. Zilkha didn’t return a call seeking comment.

More recently, Pequot was among several investment firms mentioned in court documents regarding a “pay to play” investigation of a New York state pension fund, in which several firms are alleged to have made payments to a middleman in order to secure investments from the pension fund. Pequot hasn’t been accused of wrongdoing in the case. A person familiar with the matter said that investigation didn't spur Mr. Samberg's decision to close the firm.

There is no indication that charges in the insider-trading case are imminent.

Mr. Samberg, along with George Soros, Michael Steinhardt and Julian Robertson, ranks among hedge-fund pioneers. Over his 22 years as a stock-picker, Mr. Samberg racked up annualized gains of 16.8% after investor fees were deducted, compared with 8.5% for the S&P 500, according to his letter to investors.

Despite returns like these, investors have been reluctant to sign up, partly due to concerns about the investigation. It also became harder for Mr. Samberg to recruit top talent to join the firm's staff.

Currently, Mr. Samberg manages about $3 billion. Earlier this decade, Mr. Samberg and Pequot's co-founder, Daniel Benton, split the firm, with each continuing to oversee roughly half the assets under management.

Mr. Samberg has told associates that he now plans to retire. Jonathan Gasthalter, a spokesman for Mr. Samberg, said he wasn't available for comment.

The news comes at a precarious time for the hedge-fund industry. Just a year or so ago, investors flocked to investments like these. The managers of hedge funds — who operate with relatively little oversight and earn outsize performance fees — were the envy of Wall Street.

While hedge funds generally have held up better than investment banks and mutual funds, many irked their investors last year with disappointing returns. Others didn't let their investors pull money out, citing difficult trading conditions.

The current insider-trading investigation concerns whether Pequot used information provided by Mr. Zilkha in trades that helped yield Pequot more than $2 million, according to an SEC report.

Earlier, the SEC and the Justice Department had investigated emails sent by Mr. Zilkha as he was in the process of joining the hedge fund. After a two-year probe, including interviews and a review of emails, the SEC concluded there was insufficient evidence to bring a case, the agency report said.

The investigation has generated controversy not only for Pequot but also for the SEC. A former SEC enforcement attorney, Gary Aguirre, said he was fired for trying to seek Mr. Mack's testimony. SEC officials said they fired Mr. Aguirre because his behavior became erratic and he couldn't get along with his colleagues. SEC officials also said they never called in Mr. Mack because there was never enough evidence to warrant his testimony.