



Visionary pioneer of European futures trading

Jean-Pierre Aguilar

CAPITAL FUND MANAGEMENT (CFM)

Jean-Pierre Aguilar, founder of quantitative hedge fund Capital Fund Management (CFM), was a serial entrepreneur, master collaborator, and source of energy whose legacy is a \$16bn quant firm, one of the largest in Europe. His death in 2009, whilst doing his beloved gliding, was premature but his legacy lives on through the increasingly successful firm he founded, its culture of collaboration and collegiality, and the people he brought onto its board and into its offices. Now led by a five-person board - which includes Jean-Philippe Bouchaud, Philippe Jordan, Marc Potters, Jacques Saulière and Laurent Laloux - CFM occupies offices in Paris, London, New York and Toronto and is recognised globally for its rich academic heritage, innovative approach to markets, data and technology, and track record of excellent performance.

An entrepreneur and visionary

Aguilar studied engineering and computer science at Grenoble Institute of Technology,

and business at HEC in Paris, and was thus an engineer, computer savvy, and a businessman. He founded CFM in 1991 aged 31 after he unearthed pricing anomalies in the new MATIF bond futures and personally profited from the 1987 stock market crash. “Jean-Pierre was a serial entrepreneur with real energy and drive. If he had not become a successful hedge fund manager, he would have built an even bigger software company, or another business,” says CFM Partner and President, Philippe Jordan, who first met Aguilar in the 1990s broking to CFM at a Japanese securities house. He attracted seed capital from some US hedge funds and breakfasted with leading US hedge fund managers, including Jim Simons of Renaissance Technologies, not to compare notes on models but rather to discuss building a business.

“Aguilar would always think outside the box and go forward and try new things. He did not accept the French idea that people



Left: Jean-Pierre Aguilar

Below: The current CFM board (L-R) Jacques Saulière, Chief Executive Officer; Marc Potters, Chief Investment Officer; Jean-Philippe Bouchaud, Chairman and Chief Scientist; Philippe Jordan, President; and Laurent Laloux, Chief Product Officer.



would either be making money or be intellectuals. He was an entrepreneur and had a passion for technology and computing,” says Bouchaud. For some years Aguilar ran CFM concurrently with his software business, Ubitrade, but he sold this to GL Trade in 2004 to focus purely on CFM. He retained a fascination with cutting edge computing: “In the early 2000s he was reading about quantum computing, an area that was still very early stage 20 years ago. He dreamed a little higher than others, but not too high - he dreamed about things that were possible,” says Bouchaud. Specifically, Aguilar had unfailing conviction in applying science to investing. “At a time when most investors were sceptical about applying science to finance, Aguilar had the confidence and vision that using technology and scientific methods could extract returns in a more coherent and better manner. His lasting influence on the firm was the capacity to operate out of conviction in an entrepreneurial fashion that seeks to push insight as far as possible to get better outcomes,” says Jordan.

A consensus builder who established the enduring collaborative, collegiate and open culture

Jordan recognises Aguilar’s energy as a key foundation behind today’s successes - “this energy, drive and focus was essential because hedge funds do not grow in a linear fashion” - but makes clear that it was his willingness to bring in colleagues that makes Aguilar stand out. “The first two years were strong, but the third year [1993] was harsh. He needed to rethink research and hired Bouchaud, a physicist with no background in finance,” recalls Jordan. Bouchaud remembers the spark: “I found Aguilar immediately inspiring and full of energy. It was intellectual and professional love at first sight”. The pair co-founded Science and Finance in 1995 parallel to CFM, allowing Bouchaud to combine academic consultancy with research for CFM. “In the early years, fees from clients including Soci-

ete Generale [risk management] and a UBS option trading strategy helped to finance research, but the intellectual property stayed inside the firm and laid the ground for option trading,” says Bouchaud.

Science and Finance was merged into CFM in 2000, but the firm’s staff continued to pursue and publish their academic interests thanks to Aguilar resolving a fierce debate within the firm. “We might have turned into a secretive money machine, but Aguilar took a side,” says Bouchaud. While some work is naturally proprietary, Aguilar believed in the power of fundamental research and CFM has subsequently published hundreds of papers in leading academic journals and on its website.

The research papers’ multiple co-authors reflect the collaborative ethos that Aguilar created. “He was the founder and majority shareholder but was not a king at the top. He was always interested in consensus and cohesion, and this helped us to avoid infighting. Today the five-person board leading CFM takes pride in taking decisions together, even though this is harder than doing so individually. This is part of our DNA, distinguishing us from secretive siloes in other firms. Our collaborative, collegiate and open culture is the legacy and style of Aguilar,” says Bouchaud. This culture has spillover benefits for the firm, with turnover in the C-suite and amongst researchers consistently low and quants prizing the intellectual freedom that Aguilar respected.

Aguilar was also a great team builder. “He united and federated disparate people with different backgrounds and temperaments behind ambitious projects. I was a Wall Street banker, Bouchaud was a scientist, and the other three board members are all very different,” says Jordan. The firm is also multicultural, with over 30 nationalities, and diverse in other ways. Several senior women at CFM have featured in *The Hedge*

Fund Journal's 50 Leading Women in Hedge Funds report published in association with EY and the firm is a longstanding supporter of a range of 'Women in Finance' and 'Women in STEM' initiatives.

Home grown proprietary research team

Just as Apple founder Steve Jobs was a visionary rather than a coder, Aguilar was an engineer and entrepreneur, but not a scientist leading the programming of CFM's models. He was passionate about moving research forward but knew he had to hire smart people who propagated research through their own academic and professional networks. Aguilar wanted to ensure people fitted the culture but gave Bouchaud a carte blanche to hunt talent on a scientific level. Marc Potters, who is now Chief Investment Officer of CFM, was another early hire after attending one of Bouchaud's lectures, followed soon after by Laurent Laloux in 1997, who is now Chief Product Officer (and who later featured in *The Hedge Fund Journal's* 2019 Tomorrow's Titans report).

Whereas some quant firms are vying for the same talent pool, and hiring from one another, CFM continues to predominantly grow its team organically even after building out a research team within its New York office. The academic backgrounds of the firm's researchers remain predominantly close to that of Bouchaud's: PhDs and post-doctoral researchers from hard science. In common with many quant managers CFM had eschewed finance and economics PhDs for being rigidly attached to the efficient market hypothesis (EMH). "Aguilar understood that this dogma was wrong, and even the Black Scholes option pricing theory ruling out systematic mistakes was wrong and contradictory. We wanted to hire people with data skills who had no preconceptions," says Bouchaud.

However, as the fields of economics and finance have changed, CFM's open-minded

research culture has allowed for some diversifying of academic backgrounds: "More economists and finance academics have now abandoned the EMH and no longer hide in intellectual cathedrals, and there is also convergence between these disciplines and physics or computer science. Physicists are still very much sought after for their good intuition about the world and good technical skills, but those from other disciplines such as mathematics, economics, computer science or data science are also adding different profiles to the research group. They have become more data driven as machine learning has revolutionized so many fields," says Bouchaud. Despite these changes, around 90% of CFM researchers remain from outside finance.

Strategy diversification and continued reinvention

Aguilar gave researchers the freedom to diversify strategies and, ever the visionary, spent years alongside Potters thinking about how to trade statistical arbitrage and options to diversify from simple trend following. "In the 1990s, pushing technology and techniques into these strategies was a really emerging space," points out Jordan. Indeed, while many large CTA managers can now offer multi-strategy quant, CFM was one of the first European CTAs to begin diversifying beyond trend following, in the 1990s. Evolving the strategy mix created a multi-strategy program where the low correlation between the three strategies - directional futures, statistical arbitrage and options trading/volatility arbitrage - produced a smoother overall return profile. The multi-strategy package of these three programs now contains hundreds of signals and predictors and is CFM's flagship offering: the Stratus program. True to Aguilar's vision, CFM remains predominantly focused on high alpha, high fee strategies. However, in recognition of the increasing demand for genuine decorrelation and diversification, they have recently provided access to the

more scalable models of Stratus with somewhat lower fees through their new Cumulus program.¹

All aspects of CFM's process have continued to evolve since Aguilar's passing, building on the foundations he laid, but also sometimes upending them and reinvention became a recurring theme of Aguilar's legacy. "Every 5-7 years we must rethink orthodoxies. We have survived three decades by challenging stale thinking and guarding against complacency. Our last period of underperformance was between 2016-2018 and that led to more new data including more esoteric data and more new models," says Jordan.

Aguilar talked about the "declining half-life" of alpha signals and indeed in 2025, two thirds of model signals are now post-2018. But beyond alpha signal generation Aguilar was always convinced of the need to continually innovate portfolio construction and execution infrastructure. Portfolio construction uses techniques including "agnostic risk parity" have been influential in differentiating CFM's return profile. In execution, CFM participated very early in electronification of markets that began in 2001-2002. "We were one of the first managers to conduct serious academic research into microstructure, market impact and transaction costs," says Bouchaud. It was a big game changer to interact with markets systematically, automatically and algorithmically, and avoid voice trading. If markets can be traded systematically and electronically, CFM will do so, trading almost 97% of their positions electronically and using high frequency signals down to fractions of a second to optimize execution.

As risk, uncertainty and 'unpredictable' events consume more of the public conscience, CFM's long-standing adoption of a non-normal distribution model appears increasingly prescient. CFM has inhabited a non-normal distribution world since

the 1990s and uses statistical distributions that recognize fat tail and black swan events happening more often than a normal distribution would predict. Aguilar co-authored a 1997 paper, "*Missing Information and Asset Allocation*", which argued that standardized optimization techniques could lead to overly concentrated portfolios, and in 1998 he co-authored another paper "*Taming large events: portfolio selection for strongly fluctuating assets*", which proposed a different optimization approach accommodating fat tails in share price distributions. "This awareness of non-normal distributions has been fundamental to the development of CFM's culture: Aguilar was developing non-Gaussian fat tail software to estimate risk, and I also studied fat tails and associated events as part of experimental conditions for physics. These statistical techniques can allow for modelling of avalanches of events through feedback loops. This type of modelling can yield insights into flash crashes," says Bouchaud.

Bouchaud and CFM have also led the interdisciplinary subject of "Econophysics" from its early stages; Bouchaud holds a chair of Econophysics and Complex Systems. As he explains, "Financial markets are different from the physical world because they are only non-stationary: being only partly stable, they evolve with and interact with their environment. What really distinguishes traditional quant from Econophysics is that we are building a science of economics and finance based on causal modules, such as agent-based modelling, which is in its infancy for direct trading, but should lead to better models. Coupling agent-based models with machine learning creates smarter agents, closer to the real world," says Bouchaud.

CFM strives to innovate, and agent-based modelling is only one amongst many AI applications used at the firm, with AI-based techniques, including neural networks, now used throughout its processes. "Machine

¹ CFM's strategies are actively managed and investment decision process is subject to change. Any description or information involving investment strategies, processes or allocations is provided for illustration purposes only, may not be fully indicative of any present or future investments and is not intended to reflect anticipated performance. The performance of Stratus should not be construed as representative of the performance of Cumulus.

learning is now all pervasive, used for data cleaning; data analysis; signal generation and even portfolio construction,” explains Bouchaud. However, the firm has also sought to remain in touch with its heritage, and alternative data coexists with more traditional inputs that Aguilar started with in the 1990s: “Use of alternative data has been evolutionary rather than revolutionary. Proprietary alternative data has become a big part of our inputs, but we need to look at a lot of alternative data to find a few gems, and there are a lot of rejections. We find new things in alternative data but also still rely on traditional technical, fundamental and economic data,” says Bouchaud.

Succession and organic growth

While Aguilar’s energy and entrepreneurship were fundamental to CFM’s growth, it is his teambuilding prowess that has enabled the firm to continue in this positive direction. While other hedge fund founders sought to build kingdoms, Aguilar built a federation that oversaw a seamless succession after his premature death. “Though there was no formal succession plan in place in 2009 the succession process went smoothly, because Aguilar had hired smart people,” recalls Bouchaud.

Aguilar’s death also resulted in the entry of an external partner, with Blue Owl (formerly Dyal) making its very first investment after its own launch in 2011 by acquiring part of Aguilar’s estate. “They have been a great partner to help us source staff and bounce ideas off. They’ve walked the walk,” says Jordan. Despite the success of this partnership, Blue Owl holds the only third-party stake in the firm, with the Board focused on organic growth and maintaining the highly coherent culture. This focus also influences the approach to third-party managers and, while open to the idea, CFM has never taken stakes in other firms or seeded managers or funds externally. “We are not opposed in principle but have never seen an oppor-



tunity that warrants going ahead,” admits Jordan.

The firm continues to follow the blueprint and vision originally laid out by Aguilar, with the leadership and broader business working with consensus and collaboratively for a better outcome. This has seen CFM grow from its French roots to a truly international firm that has been ranked as one of the largest ten quantitative hedge fund managers globally. Some of CFM’s leadership are now based in the US, and driven by both investor and talent opportunities, the firm is advancing plans to grow its North American presence further. Under the North American leadership of Oliver Schupp, recent partnerships with US-focused platforms and distribution partners such as iCapital have enabled a diversification of the investor base into wealth management, private wealth and mass affluent groups in the US. Meanwhile, the move of Yves Lempérière and his signal research work from Paris to New York in 2022 has accelerated the growth of the firm’s North American research team and enabled greater recruitment from US universities.

A generous and enduring legacy

Aguilar’s personality was open-minded, collaborative, incredibly energetic, charming, well-loved and generous in every way, raising assets in a fair way, and supporting students. He was extraordinarily generous and once sent a cheque to a boy he heard on a radio programme who had been unable to realize dreams of flying. “Aguilar would say: ‘You have to give to receive’. He also had a very funny personality, and we had some amazing laughs together. He loved life and was bigger than life. He was in love with and passionate about gliding and motorbikes,” says Bouchaud.

The CFM Foundation for Research was instigated by Aguilar to provide research scholarships and is another example of how he wanted to give back to the scientific community. The Foundation went through an onerous and bureaucratic process to secure French government approval in 2009 just before Aguilar passed away. PhD scholarships are awarded in fundamental science, based on excellence and originality. In terms of diversity, there are students from developing countries and a high proportion of women. In total, more than fifty PhDs have been financed with grants bearing his name.

CFM also has academic partnerships with four leading institutions: The CFM-Imperial Institute of Quantitative Finance at Imperial College, London; the CFM - Ecole Nationale Supérieure Data Science Chair, Paris; the CFM Research Chair at Ecole Polytechnique, Paris; the CFM - Columbia University Program for Economic Research, New York. These come under the philanthropy umbrella since the research fostered is furthering knowledge rather than being tailored to CFM’s needs, though visibility does help with recruitment.

Modern investment management personalized

CFM outlived Aguilar and, while many in the industry grapple with the challenges posed

by key man risk and founder succession, it is well positioned to survive the current board too. “We already have succession plans, and there is a broad and deep enough bench to be self-sustaining for many years. We will carry on harnessing hardware and software to innovate in new and powerful ways. We only become stale if technology goes stale but that seems unlikely. When Moore’s Law slowed down AI came along,” says Jordan.

Personally and professionally, Jean-Pierre Aguilar’s legacy has been to foster both academic research and innovative investment strategies. His personality is codified in the values of the firm as expounded on its website, namely embracing discovery, impact, dedication, excellence and collaboration. CFM’s strapline of ‘modern investment management’ also speaks to the essence of Aguilar’s character and ambitions for the firm. This is the man who challenged French conceptions regarding money making and intellectual pursuits, who created a culture in which researchers are able to push the envelope of economics and markets, and who combined his passion for technology and computing into the firm we see today.

Jean-Pierre’s entrepreneurial spirit runs through CFM, and the firm is constantly looking for new opportunities - be them in data, portfolio construction, talent, or technology - through which it can improve its understanding of markets and generate alpha. “Our business only changes in one direction: more. More technology, more models, more and richer datasets as researchers get more creative,” says Jordan. This growth mindset was his gift to CFM, and his enduring legacy is evidenced in the firm’s growth today. As technology catches up to the firm’s research minds, markets become more electrified, and data sources expand, CFM is primed to continue its stellar growth and enhance its reputation as a leading, modern investment manager. ♦

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