# mar

letter: october, 2024 Meditations (at Sea)

#### Preface

Curiously, we are one of the few asset management firms with a board of directors. The board consists of the three founding partners of Mar Asset: Bruno Coutinho, Philippe Perdigão, and Luis Moura. Bruno and Philippe are co-managers and main executives, while Luis serves in a "Counselor/Chairman" role, non-executive.

Since the beginning, we have often been asked about Luis's true role at Mar. Our sincere but somewhat difficult-tounderstand answer is that Luis has the unique ability to ask us original questions that we don't know how to answer. In other words, he brings a certain level of discomfort to our reflections—an essential element for our growth.

His attentive, curious perspective, anchored in a deep repertoire built over a long and successful career in the markets, generates unconventional reflections and questions, prompting the entire team to engage in slow digestion and deep exploration of his insights.

Fortunately, Luis has decided to turn some of these questions, which we've been debating intensely in recent times, into a letter. We are excited to share it with you.

In it, readers will get a sense of the kind of contribution Luis has been making to Mar Asset since its inception.

Enjoy the discomfort.

## 25 years later...

John Chambers, the then CEO of Cisco Systems, took the stage and sat in an armchair facing a large audience of about 400 people. By his side was Morgan Stanley's internet analyst, Mary Meeker, a star at the time. The question was simple and usual:"How are you seeing the current and future environment for Cisco?". The answer marked the beginning of the end of the internet bubble.

This was February 2000, Cisco was the largest company in the world by market value, and the audience—analysts and investors from around the world—were gathered at the largest technology conference at the time. Sponsored by Morgan Stanley and hosted at a sensational hotel in Scottsdale, Arizona, it escaped the traditional NY-London axis, providing a more intimate and relaxed environment, where it was not uncommon for CEOs to play golf with their main investors and bankers.

At this same conference, years earlier, iconic deals were designed: the merger between AOL and Time Warner; John Doerr and his famous dirty running shoes, leading the venture capital fund Kleiner Perkins in investments in Netscape, Amazon, and Google, in addition to new financing for the submarine infrastructure that would connect the old and new

continents through high-speed fiber optic cables, made simultaneously by Global Crossing and Level 3.

This event was, for many years, the thermometer of global investors' interest in the technology sector. The panels always featured the CEOs "of the moment", and the guests were encouraged to build fascinating futurology exercises.

On the way to the year 2000, for example, this same conference was one of the stages for the birth of Webvan. In a pre-IPO presentation so in demand that people were squeezing together, standing in the corners of the auditorium, its founders claimed to have a revolutionary model of internet sales of food and beverages. It was a virtual supermarket presenting itself as a company with software economics. The idea, in itself, wasn't necessarily crazy, but anyone who read the IPO prospectus with some attention, understood that Webvan was spending 15x more money buying fleets of vans than on e-commerce technology infrastructure.

It was in the same place that the two large listed internet investment holdings, CMGI and Internet Capital Group, were presented, back then led by young people fresh out of college who had the immense job of financing startups of all kinds. Both companies were trading, at the time, at something like 100-200x the value allocated in these companies. With each press release announcing a new investment, their shares immediately appreciated, incorporating what seemed to be a 100% probability of success of having found another "ten-bagger".

The euphoria didn't last long. A few years later, in 2002 and 2003, interest in technology was practically nil. With the conference empty, it was possible to enter a room with three other investors and have an almost private meeting with Meg Whitman, then CEO of Ebay.

Many of these stories are well known, but the most fascinating thing is the background of why the bubble happened.

Amongst the main reasons, was the combination of an intense investment cycle in new technologies—with a potentially gigantic "investable" market—associated with the low exposure of global investors to the theme, at least initially. Simple calculations, made at the time, showed that if global portfolios decided to allocate a small fraction of their cash to these innovations, something between 2 and 4%, the target "market cap" could reach a few hundred billion dollars. Self-fulfilling prophecy or not, that is exactly what happened, and very quickly.

In the 1990s, private equity and venture capital funds, now important allocation agents in new technologies, were still small or nascent. Names like Kleiner Perkins, Benchmark, and Sequoia were recognized in their niches, but irrelevant in terms of size. Other players that would become relevant, such as Tiger Global, did not yet exist, the latter being launched only in 2001, under the name of Tiger Tech. The solution for entrepreneurs seeking capital to invest in these new frontiers was practically only one: the stock market (and, for the more adventurous, the issuance of junk bonds).

Between 1997 and 2000, more than 1,000 IPOs were carried out by every company that called itself ".com", collectively valued at almost 200 billion dollars at the time of their initial offerings. There were many waves of IPOs, starting with fiber optic and physical network providers for broadband, followed by network equipment hardware, e-commerce companies, digital marketing, and search. Investment bankers at Morgan Stanley, Credit Suisse, and DLJ gained celebrity status, and a meeting with them could mean allocation in stocks that would most likely double on the day of the IPO.

At the height of the acceleration of IPOs, the Internet Capital Group was valued at \$50 billion and its CEO won the "Entrepreneur of the Year" award. This company ended up being liquidated throughout the 2000s, and in its entire history, it returned around \$700 million to its shareholders and creditors after 15 years. Surprisingly, over the following years, the founders continued to launch new funds, all with mediocre returns.

The years culminating in 2000 were years of "rebalancing" of exposure to technology companies. It was a global phenomenon, affecting both professional and individual investors. Not having tech in portfolios was a guarantee of underperformance and redemptions. Even more serious, funds that were long value and short overvalued stocks, mostly within the telecom, media, and technology sectors, suffered huge losses, and many had to be liquidated, adding fuel to the fire. The most notable of all was the Tiger, by legendary investor Julian Robertson, who liquidated his fund months before Nasdaq peaked. Funds that had no exposure to the sector—or that did not operate leveraged—survived the following years well and rode a phase of market normalization.

The point to be emphasized is the mismatch that the unbridled allocation to a new theme - "the new new thing" - can cause. When this happens, the market undergoes tectonic changes that are very difficult to predict, both when they begin and when they end.

Anyone who was able to observe, at the end of the 1990s, that global portfolios were immensely unbalanced, could have realized that a basic adjustment in exposure would lead to significant implications. But how this adjustment would happen, in how long, and what the most effective instruments to capture it would be, were secondary questions to the main decision at the time - whether or not to have exposure to the technology sector.

From there, the chosen direction could represent the chance of a successful future or sudden death as a manager/investor. The decision matrix at the time essentially involved a choice between being long, short or neutral in tech (with or without leverage).

Those who chose the most conservative spectrum of this matrix survived. From 1997 to 2000, we experienced the construction of the internet infrastructure from the "magnificent" of the time - Cisco, Sun Microsystems, Lucent, Worldcom, Akamai, Level 3 and Global Crossing. These companies, together, reached a market value of \$1 trillion throughout 1999/2000.

When John Chambers answered Mary Meeker's question, the message was succinct but clear: the cycle of accelerated growth in infrastructure investments was coming to an end. From then on, we would enter an environment of normalization (of growth and margins). Shortly thereafter, in a conference call with analysts, Chambers reiterated his more conservative view, bursting the bubble once and for all. In the following two years, Cisco shares fell 90% from their peak. Today, the internet is present in everyone's lives, but few remember many of these companies listed at the time.

Fast forward to today, we have another very significant capex cycle for the next interaction of the digital world. The big question is whether we are in 1997, in 2000, or somewhere between those periods. From 2000 to now we have lived through several "mini-cycles" in technology, which led to a great

trend of the digitalization of everything. We went through e-commerce, cloud, crypto, and metaverse, finally arriving at artificial intelligence.

There are at least two aspects that significantly differentiate the current cycle: (1) the urgency and (2) the funding; however, both are interconnected and reinforce each other.

What we are witnessing today is a ruleless race to adapt the entire cloud computing infrastructure to equipment capable of processing an unimaginable amount of information (soon, all the information in the world). We are in the midst of one of the largest and most intense investment cycles in a new technological infrastructure.

But this revolution did not come about today, with its origins dating back decades. It began almost by chance, from the obsession of a few scientists around the world to give credibility to the functionality of neural networks. Gradually, this eclectic group was sharing discoveries, mathematical equations, and ways to feed models; in addition, of course, of a bit of luck, when they decided to test information processing using non-traditional equipment, such as GPUs, originally focused on image rendering and games.

This dream, the ability to create something close to "intelligence" from large databases and computational logic – which has been challenged and discredited countless times in previous decades – has been proven step by step. Initially, through image recognition, then, voice recognition systems, through translation, autocomplete of texts, and successive victories in games, from the simplest, like Breakout, to the extremely complex, like Go. It was this long process of incremental evolution that brought us to the current state of Al<sup>1</sup> (originally known by its more technical and less sexy name, machine learning).

It is no coincidence that, from this initial group of obsessive scientists, three of them make up the board of OpenAI; another three are or were

<sup>1</sup> The topic, besides being fascinating, has the potential to turn business models in various sectors upside down, which prompted us to conduct a deep dive into the current state of AI and its possible impacts. The presentation is available on our website.

part of Google—either at Google Brain or DeepMind; one of them set up China's most powerful AI infrastructure at Baidu, and a last one helped Meta structure its metaverse and AI<sup>2</sup> strategy.

It is interesting to note that the most talked about company today, Nvidia, in addition to being the heart (or rather, the brain) of the infrastructure needed to train models based on massive amounts of data, joined the party thanks to intellectual curiosity of a group of scientists who decided to test their machine learning models in an unconventional way.

In the past, while we had Cisco, Sun Microsystems, and Lucent as the fundamental package for internet infrastructure, today we have cloud computing data centers and Nvidia as essential pieces for processing AI applications.

As a large part of the internet's infrastructure is now concentrated in cloud and dominated by four giants—AWS (Amazon), Azure (Microsoft), GCP (Google), and Meta—whose data centers are primarily based on a basic infrastructure of stacked servers with roughly the same hardware, a frenzied race for upgrades has begun so they can offer AI-related services. Initially, this involves training models, followed by applications using the "trained languages" (inference).

As the use of cloud services continues to grow at very high rates, Al upgrades are being implemented simultaneously with accelerated investments in basic infrastructure. It's the equivalent of Boeing and Airbus modifying most of their aircraft fleet without grounding them.

When the largest technology companies in the world - which control a combined capex that should reach \$200 billion dollars in 2025 - simultaneously decide to buy components from a single supplier, the balance between supply and demand changes drastically. More so when access to these components is seen as essential for the future of these companies. The balance of power ceases to be with those who pay the bill, usually at an advantage, and migrates almost entirely to the supplier. That is the situation we are in today. Buyers want all the stock available; they have no

<sup>2</sup> Some of the scientists include Yann LeCun, Demis Hassabis, Geoff Hinton, Ilya Sutskever, Jeff Dean, Mustafa Suleyman, Andrew Ng, and Ian Goodfellow.

price sensitivity, want everything as soon as possible, and have no capital constraints, as they are unleveraged and massive cash generators. Here comes another big difference between the current cycle and the one of 1999/2000 - funding. In the previous cycle, the bulk of the investments were financed by overvalued IPOs and debt issuances without the correct credit risk premium.

All this capital, directed towards the upgrade of Artificial Intelligence, ended up transforming Nvidia into the most spectacular company to appear in the last decades (and for a few months the most valuable in the world). Not just for the incredible growth and margin numbers; or for the execution capacity and vision of its CEO, who saw many years ahead; but mainly for being able to capture in an unimaginable way what started with the computational curiosity of third parties.

The quest to assess "when" this capex cycle might end, if it ends at all, where we currently stand between the beginning and the end of the cycle, and whether all this investment will translate into solid returns on capital is part of our analysis process. However, despite having our opinions, we prefer to leave the speculation to the futurists.

Still, when we take the 1997-2000 cycle as a parameter, we begin to see similarities in "excitement" and cognitive noise in the decision-making of large technology companies. Everyone doing the same thing at the same time, does it make sense?

Nvidia's earnings revisions have followed the pattern of networking companies in the late 1990s, when each quarter the dynamic was to "beat and raise", with analysts extrapolating into the future the trajectory of the recent past. Continuous margin expansion, significant growth, additional market share gains (even though the company already holds something like 85% of the marginal capex representation in cloud), incorporation of new segments (eg: Sovereign AI) and so on.

The "AI effect" of Nvidia has been felt across all related sectors, spanning from component companies, servers, memory, and information security to energy generation companies—some of which have appreciated at rates multiple times greater than Nvidia's own valuation. These companies are being evaluated with unconventional metrics, such as the percentage of the addressable market, sales multiples, normalized margins projected ten years ahead, among others. The combined market value of these companies has already reached several trillion dollars.

The latest rounds of funding for OpenAI, Anthropic, and other "core AI" companies have also attracted a lot of attention due to the FOMO (Fear of Missing Out) component of super-experienced funds. It is the classic capex cycle spreading in waves and encouraging investors to find the 2nd, 3rd and 4th derivatives to the theme. In 10 or 20 years, when we analyze this period, the winning companies will probably not be the same, or perhaps they haven't even emerged yet.

Going back to the topic of risk management, when these cycles appear, the investor needs to return to the basic decision-making matrix: participate, not participate, or bet against, with or without leverage.

Today, unlike the end of the 1990s, the technology theme is already very present in global portfolios. As American tech companies (and some outside the United States) have been dominating the "growth" theme for a long time, we currently have portfolios probably overinvested in the sector.

Added to this, the growth of venture capital and private equity funds dedicated to technology has accelerated in recent decades, further increasing investors' exposure to the theme. The overinvestment coming from them, however, is not necessarily related to the theme of the moment - Al.

# Pod Shops – Masters Of The Universe?

An aggravating factor, in our view, is the concentration dynamic that exists in today's global equity markets, especially in the United States. Currently, more than 40% of the trading volume on the U.S. stock exchange is handled by quantitative funds and multi-manager hedge funds. Adding index funds and ETFs, this share of the volume is likely nearing two-thirds of the total, with the remaining one-third being traded by retail investors (who have been behaving like kids in a candy store) and more traditional funds.

In the past, we wrote a letter about the phenomenon of quantitative funds, which, with the evolution of AI and the ability to train models with billions of pieces of information, continue to increase their competitive advantage in the market, in a format of "arbitrating" the world.<sup>3</sup>

The other key player in today's market, and perhaps the segment that has grown the most in recent years, has been multi-manager funds, known internationally as "pod shops". Over the past 20 years—especially after the 2008 financial crisis—these funds have grown to more than \$400 billion in net assets, with total assets now exceeding \$2 trillion, representing a significant portion of hedge fund allocations today. Remarkably, in the past two years, most of the demand for these funds has come from retail investors and private banking, rather than large institutional allocators.

The model is relatively simple in concept, but very complex in execution. In these funds, capital is allocated to independent teams that have the small freedom to invest in a specific segment of the market - be it asset class, sector, style, geography, or a combination of these factors. For this team, capital is allocated dynamically - whoever performs better gets more capital, and vice versa. The important thing is to always follow the predetermined risk parameters - be it VAR, stress, or a strict matrix of exposure, concentration, and liquidity, amongst others.

For the CIO of a pod shop, the secret lies in risk control and talent maximization. Dozens or even hundreds of portfolios are independently managed but aggregated into a single portfolio, through which a wide range of factor risks are controlled. In order to have the flexibility to allocate more or less capital to these silos, it is essential to maintain low correlation amongst them, ensuring that a simultaneous liquidation does not permanently impact performance. Until about ten years ago, very few funds could consistently achieve this, with the most notable being Millennium, led by Izzy Englander, SAC Capital (now Point 72) led by Steve Cohen, and Citadel, led by Kenneth Griffin—all phenomenal risk managers, relentless with underperforming teams, and excellent recruiters.

These funds have two main characteristics that differentiate them from traditional hedge funds.

<sup>3</sup> Letter: The attack of the Quants, July, 2020

First, there is the compensation model. To attract top managers, they pay very well, often amounts equivalent to what the manager would earn with their own fund. For the best, this typically means something close to a 2% management fee and 20% on the returns of their portfolio.

The second characteristic is the aggressive use of leverage. A traditional mutual fund that invests in stocks, for example, does not use leverage. A "long/short" hedge fund typically leverages between 30% and 100% of its assets under management. A pod shop, on the other hand, leverages between five and seven times the amount raised from clients. Each billion dollars raised implies a potential book with investments totaling five to seven billion. That's why ruthless risk management is critical. A negative performance of a few percentage points is greatly amplified by leverage.

For the investor, these funds generate returns with lower correlation and less volatility than "normal" hedge funds, providing a sense of security due to the strong Sharpe ratio. But do they actually carry less risk?

The value proposition, in a simple way, is the following: I'm going to take your money, leverage it several times, and generate a mediocre single-digit return, but due to leverage and risk management, I promise to amplify it with an incredible "return versus volatility" ratio while trying not to blow up (but I can't guarantee it). Would you invest?

So far so good. As they say, there are countless ways to make money. The problem begins when this formula starts to be replicated by less experienced new entrants, for less liquid assets, and by raising money from investors who do not understand exactly the risk they are taking. In the last five years, more than 30 funds with this strategy have been launched in the United States alone. The super-experienced Citadel, Millenium, and Point 72 are either closed to fundraising or returning money to investors. Recently, Steve Cohen announced that he will no longer operate for his Point 72 fund, and transformed the central portfolio, previously managed by him, into a book with quantitative decisions.

As the growth of these funds has far outpaced their ability to attract talent, a new phenomenon has emerged recently: the accelerated allocation of capital to external managers. The pod shop raises capital from clients and allocates part of this capital to already established external funds, albeit with significant misalignment with the other investors of the chosen external fund. These are typically managed accounts with full portfolio transparency and much better redemption terms than those available to the fund's usual clients. A recent Goldman Sachs study estimates that nearly 70% of pod shops allocate a portion of their capital to external funds—and always with significant leverage.

Recently, our fund - a niche fund in Brazil - was approached by a foreign pod shop interested in investing a significant amount in the managed portfolio structure, where all of the fund's investments should be transparent and reported daily, in addition to requiring better liquidity conditions than our investors. After five minutes of conversation and half a dozen questions, we thanked them for their interest. "Thanks, but no thanks..."

Returning to the themes of technology and the investment cycle, the main trade that has worked over the past 14 years has been going long on growth (generally through U.S. tech stocks) and short on indices or stocks in other sectors. We imagine that the exposure of quantitative funds and pod shops to this theme is very significant, given that the performance of both groups has been quite consistent with the sector's performance.

When asked about the major risks in the market today, one of the biggest concerns that keeps us up at night is this combination of an accelerated product cycle concentrated on a few companies—with global market cap dominated by large tech companies—in a market where daily trading volume is no longer driven primarily by fundamental decisions, but rather by quantitative strategies or incentives to accelerate/decelerate leverage and risk-taking.

There are trillions of dollars of liquidity controlled by systems or managers who are often misaligned or inexperienced, extremely sensitive to any small price variation, whose leveraged or automated momentum algorithm-based portfolios help feed the same themes in a large circular reference.

In the last five years alone, pod shops have raised nearly \$100 billion and hired around 10,000 people. It was the alternative segment that grew the fastest and hired the most people. With this, in addition to the need to allocate more capital (remember the leverage), they had to set up robust structures to train potential decision-makers in an accelerated way, so

that these new "managers" could direct the capital raised in the best way possible. Thus, various specialists have emerged to train decision-makers, employing methods ranging from formulas borrowed from baseball to poker-style statistical analysis, as well as involving psychologists, AI, and more. But how big is this challenge, really? This topic will be explored in the next session...

# Meditations

What makes a person good at making good decisions? Can this be taught?

If you ask the decision makers directly - good or bad - they will all mention a lot of reading, common sense, resilience, risk appetite, and intuition, amongst other characteristics.

And if you ask the same group, amongst the most experienced, you will hear that throughout their lives they have met few, very few, consistently good decision-makers.

So the funnel is narrow. You can feed the entire class of students on the subject with the same skills, but what will come out the other side will probably be a statistical error.

What are the ingredients that we believe to be the basis of this recipe?

In general, a combination of (i) self-confidence and stubbornness toward the outside world—paired with insecurity in the debates you have with yourself, (ii) a certain comfort with solitude, and (iii) a semi-blasé attitude toward victories and defeats (aka emotional control). Layered over this foundation are countless possibilities of individual traits.

A good risk-taker cannot be swayed by the obvious, by others' opinions, or by trending topics. They need a certain level of arrogance to believe that "the others" are wrong. They challenge the consensus but are internally tormented by this conflict.

This level of confidence can stem from an innate personal trait—which, without the balance of doubt, is a recipe for disaster—or from a certain degree of genius, which is extremely rare and not replicable.

The sweet spot is measured self-confidence—combined with lots of content, creativity, and doubt.

To these characteristics, we would add one more—the ability to outline probabilistic scenarios around a decision. After all, statistics might be the branch of mathematics that comes closest to the human sciences: it rarely requires complex calculations or equations, doesn't lead to absolutes, feeds the indecisive, and protects the arrogant. It's a religion to be practiced and refined, fueled by one's own cognitive history. Perhaps it is the most powerful decision-making tool when combined with killer instinct and risk management.

It is certainly very powerful, too, to help with everyday decisions. Go to your mother-in-law's birthday or your friends' soccer game (or surfing)? The probability tree of this decision, when made repeatedly, certainly does not reflect a normal distribution, especially when one consistently decides on football.

In fact, the statistical distributions of this tormented being—caught between stubbornness and insecurity—never follow a normal curve; otherwise, it would be easy. It's usually in the tail events where the real magic happens. Easy doesn't exist.

In the mind of a good decision-maker, the process is organized in a matrix-like, weighted manner: "I prefer this over that", "this risk has a higher or lower probability of occurring", or "this decision has a greater chance of success". There is no room for absolutes. "I'm certain", "I guarantee", and "I vouch for it" are not part of their vocabulary.

At the same time, to differentiate yourself, you need to believe in this always partial conviction and, from time to time, bet big.

Statistics are also crucial in balancing arrogance and insecurity. In a 50%/50% distribution, the best decision is often to do nothing. And, to top it off, everything is dynamic. The last decision feeds back into the model, often with biases that cloud the next one. Five years in a row choosing football without major consequences—should that increase the likelihood of it being the right choice again? The key is not to let luck (or misfortune) weigh too heavily in the assessment.

A good decision-maker seems to demonstrate a lot of certainty to the outside world, but his inner demons keep screaming - 'IT'S GOING TO SHIT!'.

"I believe in myself, but I have doubts", "I got it right, but it may have been luck", "do I include or not the last decision – and the last result – in the statistical inference model?"

While the initial process of analyzing a potential decision follows a course similar to that of traditional physics (with direct relationships between variables and that can be described in relatively simple equations), the actual decision-making process is more like the dynamics of quantum physics.

Imagine this person, who spends most of their time researching (rather than making decisions): their mental model as an analyst is likely traditional, perhaps matrix-like. Following this more linear logic, the moment of decision-making should be sequential and straightforward—but is that the right approach? Or should they incorporate all the new variables that arise between completing the analysis and making the decision? Mood, intuition, past outcomes, and the people involved.

And the moment you make the decision, this also has to be fed back into the model, perhaps with a new bias variable. In quantum physics, this would be the equivalent of the observation effect. When you identify one of the characteristics of the particle (whether it is movement, speed, etc.), the other characteristics immediately change. Before making a decision, there is usually an important element in the equation - GREED - which can be observed, quantified, and directly influences the expected outcome, but which mysteriously, shortly after the decision is made, disappears, reappearing in another place in the brain and with another name - FEAR! Not even Einstein would understand.

Beforehand, your perception of the variables used in the decision is one thing. Afterward, it changes, fueled by doubt, fear, and excitement.

Curiosity about how to master these inner conflicts would be enough for aspiring decision-makers to spend a lot of time studying themselves. What personal characteristics of yours should be enhanced (or stifled) to help the process? But first, comes the diagnosis of what your personal characteristics are. A deep understanding of your strengths and weaknesses isn't taught in any school. It's a personal, intense, and often brutal exercise, but if not faced earnestly, it turns into half-truths that obscure the decision-making process and hinder growth. There's a quote attributed to Adam Smith that captures this idea: "If you don't know who you are, the market is an expensive place to find out". A bit of psychoanalysis can also help process all these conflicts.

At the end of the process, the graduate of the decision-making school needs to leave with the diploma of what his true mental model is. A multidimensional and dynamic model.

For an idea of a mind tormented by constant decision-making and its implications, it is worth reading some passages from the book "Meditations", written by the Roman emperor Marcus Aurelius around the year 160, the final phase of the era known as Pax Romana.

During his reign, Rome once again faced a series of wars, and Marcus Aurelius liked to make notes addressing his internal conflicts, especially during harsh military campaigns. But the most interesting thing about the book is the way he found to defend himself internally from conflicts generated by problems that were not under his control. Perhaps it is one of the great treatises of Stoicism.

The similarities with decision making in the financial market are numerous. The individual who suffers from all situations, both those generated by himself and by third parties, will have a short life (or will enrich his psychoanalyst instead of his investors!). So, within this filter of analysis of decision-making and its results, separating what is your entire responsibility and what is simply 'chance' is fundamental. Through Stoicism, Marcus Aurelius was able to focus only on the fundamental issues that were under his control. In his mental model, developed in conversations with himself, Marcus Aurelius defined a North where values such as ethics, doing good, and humility were located. His decisions, however conflicting they might be considering his role, were always guided by this North. Filters were a fundamental part of his decision-making process.

A small example of these "meditations", which resonates with our lives (in the financial market), was put by him in the following way: "In your actions,

do not procrastinate. In your conversations, do not confuse. In your thoughts, do not wander. In your soul, be neither passive nor aggressive. In your life, don't be all about business."

In the market, our decisions translate into a raw form of response – profit or loss, right or wrong. With each result, there is no statistical distribution, half right or half wrong. Either you win or you lose, it's a binary system. And we always think we win little or lose a lot. It's never enough.

We have on one side a tormented decision-maker, who works with probabilistic mechanics messed up by his own biases. On the other, a dry resultant, which is always binary. You can have a 70% chance of being right, but if you're wrong, you're 100% wrong. SLAP IN THE FACE!

What is the solution to this conflict? One is to understand that making mistakes is a structural part of the process, but that seeking statistical self-analysis to understand your hit ratio is also fundamental. Simply put - get it right more often than not, or, if you miss more, make sure your wins are bigger (a skill few possess!).

Roger Federer, for example, had a hit ratio of "only" 54% of the points played, but he became the greatest tennis player of all time, winning 80% of the matches. In poker, extensively analyzed by cognitive psychology expert and former player Annie Duke, the hit ratio of the best professionals does not reach 55%. In the financial industry, the hit ratio is structurally low, perhaps lower than in other sectors. This analysis, while seemingly simple, has its complications. Just like in poker, doing nothing ("fold") is sometimes the best decision. This one, however, does not enter the statistics, messing up the hit ratio and complicating everything even more!

The surprising part is that even when we understand this dynamic—that we will win and lose roughly the same number of times—the devastation caused by losses is overwhelming. Do heartless, soulless quantitative funds have a huge advantage in this regard?

# Conclusion

Pod shops have been operating the same leveraged trade, in their various formats, for almost a decade. Long growth, short value, long tech stocks, short bank stocks, long large-cap tech, short small caps, long carry currencies, short yen. This long track record stains mental models - "it worked, it will continue to work." They're all choosing football year after year and forgetting about their mother-in-law.

Because it has been working, more money is being raised for the same things, reinforcing the cycle. But the more capital involved, the more challenging it becomes to generate excess returns. These funds now manage around two trillion dollars, and it would already be difficult if there were decision-makers skilled enough to handle the scale of the challenge. However, it may be nearly impossible given the reality of increasingly less experienced managers, shaped by questionable training, misaligned incentives, and market biases potentially skewed by long-standing trends. On top of this, we are experiencing the largest tech capex cycle in history, led by the world's largest companies by market value, with no clarity on timelines, potential profitability, or long-term winners.

How many of the 10,000 new employees in pod shops will emerge from the funnel as good decision-makers? How many will be ground up? Meanwhile, what percentage of the two trillion dollars is in the hands of those who are halfway through the journey and will become statistical errors?

Let's await the scenes from the next chapters...

Luis Moura

### Cover Image:

The Ninth Wave

Hovhannes Aivazovsky, 1850 Oil on canvas, 33,2 x 22,1 cm source: Google Arts & Culture

'The Ninth Wave' is often interpreted as a metaphor for humanity's struggle against the uncontrollable forces of nature, with the sunlight symbolizing hope in the face of adversity. The painting reflects an optimism that, even amidst the overwhelming power of storms, there remains a chance for survival and redemption.'



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