

Epistemology in Investing

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Dear Investors,

Brazil has a culture strongly rooted in empiricism. It is common to hear that “in practice, theory is different.” Conceptual knowledge tends to be undervalued, while quick fixes and shortcuts—ways to achieve results without fully understanding how or why they work—are often prized. As a result, experience is frequently valued more than erudition, as time spent in an activity is associated with accumulating practical tricks and real-world examples.

There is nothing inherently wrong with practical knowledge developed through direct experience. Few things provide greater conviction than firsthand evidence. However, the empirical method is also the slowest and most demanding way to accumulate knowledge. Without the ability to derive general principles that can be applied across different situations, our capacity to act would be severely limited. It would be akin to trying to memorize the results of many individual additions instead of understanding the underlying logic that allows one to add any numbers.

Most people would likely agree with this. Yet, in practice, many abandon theoretical study once they leave academic environments and rely primarily on empiricism thereafter. Even in intellectually sophisticated fields, this tendency is visible among many practitioners. Investing is no exception.

An extreme example is the hopeful day trader, who believes that by spending enough time watching minute-by-minute price charts and memorizing dozens of patterns identified by other traders, they will develop the ability to recognize signals that predict future price movements—and that this will be sufficient to generate consistent returns.

Another common, and less obvious, case is the investor who spends their days trying to stay informed about everything happening in real time, under the assumption that following all news, facts, and rumors will provide an edge in market positioning. As with practical experience, staying informed has its value, but an exclusive focus on this activity is neither efficient nor particularly constructive for an investor. Our approach is quite different.

The Problem with Empiricism

The greatest challenge in forecasting a company’s results does not lie in understanding a specific dynamic within its business. Financial mathematics is straightforward, and commercial relationships between two parties are typically simple. What introduces complexity is that businesses are open systems, subject to a very large number of variables. Some are known and easily measurable, while others are difficult to identify and quantify. It is the interaction of these many simple relationships that ultimately forms highly complex systems with behaviors that are difficult to predict. The investor’s challenge is how to analyze systems of this nature.

Relying on memory to find a similar case and assuming the same outcome will occur is the instinctive approach, but it carries a large margin of error. It is nearly impossible to identify two business situations that are sufficiently comparable for outcomes to be reliably replicated. Companies, competitive environments, and market contexts differ case by case, making analogies inherently flawed. Identifying exactly what makes a business successful has long been an aspiration but attempts to create a simple and quick method to achieve

this have consistently fallen short. A well-known example is the book *Built to Last* (Jim Collins, 1994), which selected companies with outstanding performance in the decades prior to its publication and attempted to identify the factors that made them so successful and sustainable. In the following decade, roughly half of those companies went through periods of decline, undermining the predictive power of the framework presented in the book.

We are deeply skeptical of any simple method for forecasting the future of a business, as companies are far too complex to be adequately described by a small set of measurable variables. Nevertheless, many investors rely on average valuation multiples of “comparable companies,” a method that we view as useful mainly for illustrative purposes or for identifying extreme mispricings. What, then, would be a better approach?

First-Principles Analysis

Any analysis begins by breaking down the system under evaluation into simpler components, until clear and repeatable relationships between variables become evident. The description of the dynamics underlying these recurring patterns is what we refer to as first principles: broad abstractions that, while ignoring many details, allow us to anticipate the general behavior of a wide range of similar situations.

A classic example of first principles is Newton’s Laws, which allow us to predict the motion of objects in space. Although predictions derived from them are never perfectly precise—due to factors such as friction—an inexperienced engineer who understands these laws will often be able to forecast the behavior of a mechanical system more accurately than an experienced engineer who lacks the theoretical foundation and has never encountered a similar system in practice.

In business, we will never achieve the same level of precision as in physics, but first-principles reasoning is still applicable in certain contexts. We know, for instance, that the law of supply and demand implies that a water stand in a desert tourist destination could charge very high prices if it is the only one available. We also know that such elevated prices are unlikely to be sustained over time unless there are barriers preventing competitors from entering, as unusually high returns tend to attract competition.

The advantage of these simple and intuitive inferences is that they are far more reliable than overly broad conclusions—such as those presented in *Built to Last*, which identifies factors like ambitious goal-setting and strong corporate culture as drivers of success. Many companies with strong cultures and ambitious goals will fail, but a monopolistic water stand in the desert will almost certainly charge high prices.

There are relatively few general principles in business that remain stable over time, but there are also principles that apply to specific sectors or periods and can be useful in investment analysis. As the world evolves, some of these principles become obsolete while others emerge. Identifying a still underappreciated principle can be highly valuable, as it increases the likelihood of uncovering pricing asymmetries not yet recognized by the market.

Our objective is to develop mastery over as many relevant first principles as possible to support our investment analysis. The most effective way to expand this repertoire is through study. We dedicate significant time to reading and seek out a broader range of content than what is typically covered by market professionals. We also attempt to derive general principles from our own direct experience, but this is a secondary approach, as learning from the insights of others is a more efficient way to acquire knowledge. That is the real shortcut.

The Importance of Focus

The world is vast and our time is limited. Even when applying the most efficient learning methods, there is always a trade-off between breadth and depth of knowledge. Investors who attempt to understand every possible investment opportunity inevitably end up knowing each one superficially, increasing the risk of overlooking critical factors that could undermine their expectations.

In theory, this challenge could be addressed by building large teams of analysts, each covering a subset of companies. Many asset managers adopt this approach, but we are skeptical of the ability to assemble large groups of highly skilled investors who can collaborate effectively and produce a single coherent portfolio. We believe that high-quality decisions emerge from a mind that integrates all relevant information, and that a small number of highly dedicated and capable individuals is preferable to large teams—intelligence and judgment do not simply add up when people come together.

It is impossible to know everything in depth, yet there is an expectation that professional investors should remain well informed about all publicly listed companies. This is similar to how laypeople often believe that doctors should be able to treat any medical condition. Many investors attempt to meet this expectation through an approach that is commercially effective but adds limited value to investment outcomes: memorizing facts and data points that create the impression of deep knowledge.

It is as if someone were asked whether they know a particular person and replied: “Yes, of course—I know him. He is 48 years old, 1.76 meters tall, weighs 82 kilograms, has short gray hair, arrives at work every day at 8:15 a.m., runs in Ibirapuera Park, and likes lasagna.” This collection of details may appear to reflect a deep understanding, but it could just as easily be based on a single observation and offer little insight into anything truly meaningful about the individual. The equivalent in investing is memorizing the latest quarterly financial figures, the names of all executives, and various other superficial details.

We prefer to choose our battles and focus our efforts on a limited number of businesses, with the primary objective of ensuring that key risks do not go unnoticed—given the high cost of making a wrong investment. The same logic applies in healthcare: it is better to consult a specialist, as the consequences of error can be severe. For everything we do not study in depth, we simply acknowledge our ignorance—which leads us to the next topic.

Intellectual Honesty

The most significant mistakes are not driven by conscious ignorance, but by confidence in a flawed judgment—leading to harmful actions taken with conviction. In investing, we deal with subjective analysis and incomplete information, so certainty is rare. Arrogance (or naivety) can lead to severe losses, making it essential to be fully realistic about the depth of our understanding in each area we analyze. While this may seem like common sense, the culture of financial markets often points in a different direction.

In practice, admitting ignorance on a given topic is often perceived as a sign of incompetence. Young analysts are trained to respond with confidence at all times, even when their answers rely on estimates or on-the-spot speculation. The person asking the question often does not know the correct answer well enough to challenge them—and sometimes the question itself is not particularly relevant. As a result, many believe it is better to project confidence than to risk appearing unprepared. The problem is that we are shaped by our habits, and this is not a desirable trait to cultivate in investment professionals.

Human nature already inclines us to overestimate our own abilities in order to protect our ego. A well-known example of this behavior was documented in 1981, when psychologist Ola Svenson conducted a study in which 93% of American drivers believed they were above-average drivers. Being truly rational requires active

effort and a certain degree of methodological rigor. In other words, intellectual honesty is a habit that must be deliberately cultivated.

Putting Sound Principles into Practice

Understanding a method is usually much easier than executing it. What needs to be done to reach the summit of a mountain is obvious: walk or climb until you get there. We believe that a good investor should complement direct experience by developing academic knowledge and a strong theoretical foundation across a broad set of first principles that can be applied in investment analysis—while remaining mindful that focus on carefully selected areas is necessary to achieve sufficient depth.

This approach does not deliver quick results. We believe that only continuous, lifelong dedication allows us to become better investors over time, as is the case in most professions. In fact, we believe it is essential to maintain sound intellectual habits in our personal lives as well, as it is not possible to compartmentalize one's mindset. Those who are disciplined and rational at work tend to carry these traits into their personal lives, just as those who develop poor habits in private will bring them into their professional activities.

At first glance, this may seem like a demanding approach, but it is actually a benefit that the same skills required to generate strong investment returns also contribute to a more orderly and balanced personal life—and vice versa. We believe that the practices described here have no drawbacks, regardless of one's primary occupation.