MY VIEW ON CURRENT EVENTS

WHEN MODELS DEPART FROM REALITY

There comes a point when markets start trading differently from the world we live in.

Not consciously, not maliciously—but quite naturally, almost automatically.

The stock market does not evaluate what is physically possible.
It evaluates what it can imagine.

That sounds harmless. But the longer you think about it, the greater the gap between the two worlds becomes.

THE SILENT SHIFT

Many models assume growth paths that are mathematically correct but have only limited relevance to the real world.

A model does not check energy limits.

It does not check whether infrastructure can be built.
It does not check whether supply chains exist.
It does not check whether skilled workers are available.
It does not check whether political conditions allow this at all.

Models calculate—and they continue to calculate.
The world, on the other hand, builds, delivers, slows down, fails, corrects.

A tension arises between the two that is rarely addressed because it forces us to question the foundation of many evaluation logics.

A THOUGHT THAT LEADS DEEPER

For years, I have observed that markets are not only trading on a rising future, but also on a **disappearing reality.**

The further models move away from physical boundaries, the more the market becomes a system that evaluates **expectations based on expectations.**

A kind of closed loop.

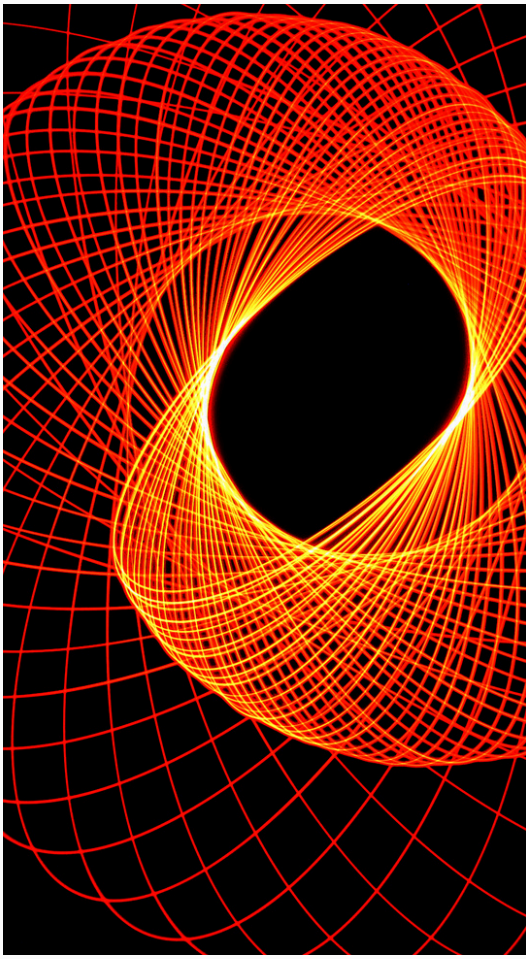
And in such loops, prices arise that are no longer linked to what is possible, but to what seems conceivable.

This is what makes markets fascinating—and fragile.

You can see it in many areas at the same time:
in electric mobility, in renewable energies, in semiconductors, in cloud ecosystems, and, of course, in the current AI boom.

The pattern is always the same:

The technology can be thought of in exponential terms—
the world in which it takes place remains physically limited.



WHY THIS IDEA IS IMPORTANT TO ME

I am not interested in criticizing an industry.

My aim is to highlight how ratings are created and how easily they can deviate from reality without anyone noticing.

This discrepancy does not arise in the market—
it arises in the assumptions behind the models.

To understand the market, one must not only perform calculations, but also understand the limitations that models do not reveal.

This blog post is just the beginning.
The surface.

If you dig deeper, it becomes clear that many evaluation logics only work because they ignore physical and infrastructural realities.

That is exactly what I examined in the supplementary paper:

“Exponentiality in technology versus economic reality:

Energy limits, infrastructure, and evaluation of AI systems”

A physical-economic evaluation framework using the example of the semiconductor and AI industries

There, I combine the questions from the blog with a structured framework:

- What does exponential growth mean in a finite world?
- What limits does energy impose?
- What limits does infrastructure impose?
- How far can production capacities realistically grow?
- Which assumptions in common assessments are physically impossible?
- How can technology sectors be assessed without losing touch with reality?

My blog opens the topic.
My paper concludes it.

AUTHOR: PETER KRAUS

PETER.KRAUS@AMYGDALUS.COM