

# Can Jeremy Grantham Profit From Ecological Mayhem?

By Carlo Rotella

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Sitting in a Panera in Boston's financial district in early July with Jeremy Grantham, I suddenly found myself considering how I might safeguard my children's and notional grandchildren's future by somehow engineering the U.S. annexation of Morocco.

Grantham, the founder and chief strategist of the asset-management firm GMO, was reading aloud from a rough draft of his next quarterly letter to investors, in which he ranks some long-term crises of resource limitation along a scale from "merely serious" to "dangerous."

Energy "will give us serious and sustained problems" over the next 50 years as we make the transition from hydrocarbons — oil, coal, gas — to solar, wind, nuclear and other sources, but we'll muddle through to a solution to Peak Oil and related challenges. Peak Everything Else will prove more intractable for humanity. Metals, for instance, "are entropy at work . . . from wonderful

metal ores to scattered waste,” and scarcity and higher prices “will slowly increase *forever*,” but if we scrimp and recycle, we can make do for another century before tight constraint kicks in.

Agriculture is more worrisome. Local water shortages will cause “persistent irritation” — wars, famines. Of the three essential macro nutrient fertilizers, nitrogen is relatively plentiful and recoverable, but we’re running out of potassium and phosphorus, finite mined resources that are “necessary for all life.” Canada has large reserves of potash (the source of potassium), which is good news for Americans, but 50 to 75 percent of the known reserves of phosphate (the source of phosphorus) are located in Morocco and the western Sahara. Assuming a 2 percent annual increase in phosphorus consumption, Grantham believes the rest of the world’s reserves won’t last more than 50 years, so he expects “gamesmanship” from the phosphate-rich.

And he rates soil erosion as the biggest threat of all. The world’s population could reach 10 billion within half a century — perhaps twice as many human beings as the planet’s overtaxed resources can sustainably support, perhaps six times too many.

Grantham, who is 72 and has what’s left of a British accent after living in Boston for more than four decades, outlined this wildly distressing assessment against a bland backdrop of chain décor and piped-in smooth jazz. He marked up his draft with a pen as he went along, departing from the text at times to emphasize a point.

“Phosphorus makes up 1 percent of your body weight,” he said, looking up from the page to catch my eye. “It’s a basic element, the residue of exploded stars. You can’t just make more.” He also pointed out that most economists see global trade as a win-win proposition, but resource limitation turns it into a win-lose, zero-sum contest. “The faster China grows, the higher grain prices go, the more people in China or India who upgrade to meat, the higher the tendency for Africa to starve,” he said.

Grantham argues that the late-18th-century doomsayer Thomas Malthus pretty much got it right but just had the bad timing to make his predictions about unsustainable population growth on the eve of the hydrocarbon-fueled Industrial Revolution, which “partially removed the barriers to rapid population growth, wealth and scientific progress.” That put off the inevitable for a couple of centuries, but now, ready or not, the age of cheap hydrocarbons is ending. Grantham’s July letter concludes: “We humans have the brains and the means to reach real planetary sustainability. The problem is with us and our focus on short-term growth and profits, which is likely to cause suffering on a vast scale. With foresight and thoughtful planning, this suffering is completely avoidable.”

Grantham’s quarterly letters, which command a cult following of readers within and beyond the financial industry, inspire even the most short-term profit-minded investors to do a little fate-of-the-world-scale thinking. I find that they have the opposite, equally mind-stretching effect on a passive investor like me. Although I’m

normally happy to turn over my paychecks to the missus and not inquire into what happens to them, my encounters with Grantham tend to whip me into a state of alarm that has me thinking about acquiring tracts of arable timbered high ground, preferably defensible ones well inland from the rising seas.

**Doomsayers are always** plentiful, and the economic and environmental news has encouraged even more doomsaying than usual of late, but Grantham compels attention, in part because he's not simply prophesying doom. While it may be too late to "gracefully" deal with depleted resources, climate change and related crises, it's never too late to mitigate the damage. And, crucially, the consequences will be unevenly distributed, creating angles for you to make money and look out for your interests, however you define them.

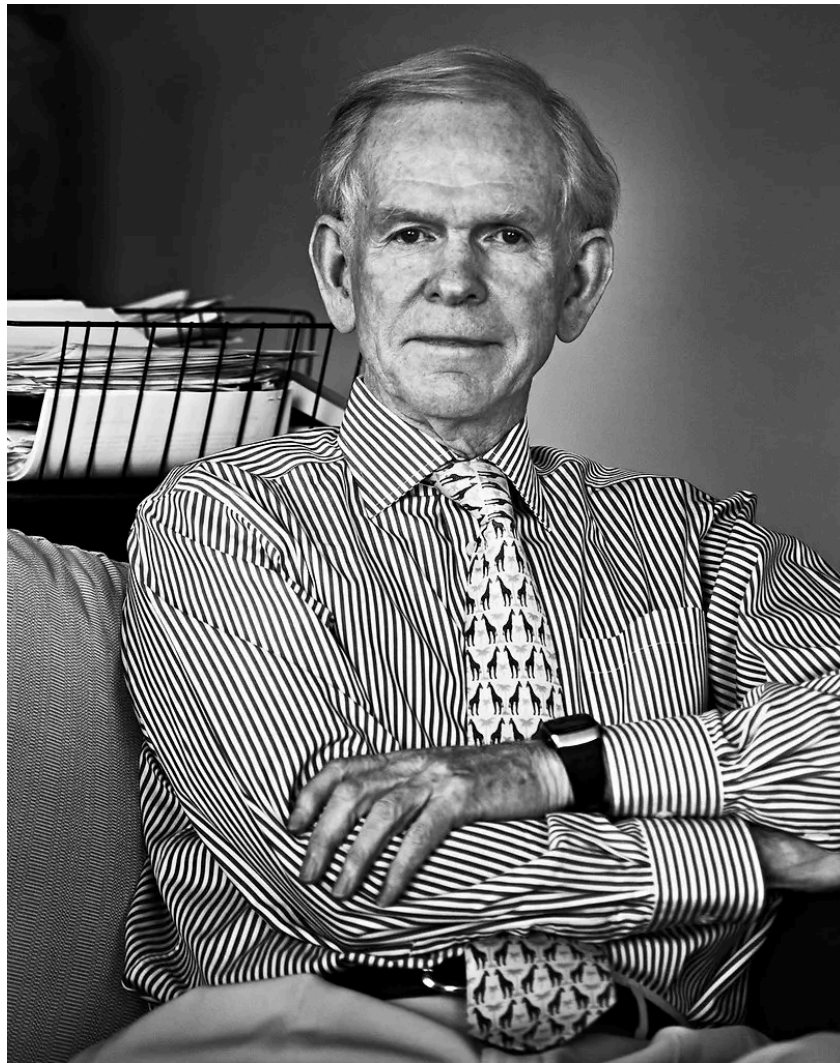
"I never think of him as one of the doom-and-gloomers running around like chickens with their heads cut off," says Barry Ritholtz, the head of the quantitative research firm FusionIQ and a widely read commentator on the financial world. "He's not telling people to stockpile water and dehydrated food. He's saying this asset class will underperform or not." Distinguishing Grantham from other notable big-picture pessimists like Nouriel Roubini and industry skeptics like James Grant, Ritholtz says: "Keep in mind that he has run a lot of money. He's like a mechanic who's telling you, 'Fix this, or you'll have trouble down the road.' Then there are all the kibitzers standing around watching the mechanic and

offering advice.” Ritholtz likens Grantham to Warren Buffett, another mechanic with advanced rhetorical skills — “only Buffett’s buying companies and Grantham’s looking at asset classes: ‘For the next 10 years, buy commodities.’ ”

Grantham has a long track record. He was right about indexing, an investment strategy he took a lead role in inventing, when everyone else assumed that you should try to beat the market rather than join it, and about the long rally in small-cap stocks in the early 1970s, the bond rebound in 1981 and the resurgence of large-cap growth stocks in the early 1990s. He was also, well in advance, right about one bubble after another: Japan in 1989, tech stocks in 2000, the U.S. housing market and financial markets and global equities in 2008 (in the wake of which, when investors were still reeling, he made a celebrated and early bullish call in a letter titled, “Reinvesting When Terrified”).

Grantham wasn’t the only one making those calls — although he grew famous by making them more persuasively than others — nor has he been infallible. As a stock picker, he made his share of losing bets. Jack Meyer, who runs Convexity Capital Management and is the former head of Harvard Management Company, told me a story about Grantham speaking at a conference in the 1990s: “Jeremy had seen a tough patch, underperforming for a couple of years. He gets up and says, ‘Ladies, gentlemen, clients, *former* clients. . . .’ Everybody laughed, but it tells you three things: he’s in it for the long term, he’s not shy about pointing out when he’s off

and he's supremely confident." Grantham, who has largely turned over the task of handling GMO's clients' money to younger colleagues, has become a kind of in-house intellectual — "chief of propaganda," as he puts it — a role eminently suited to his gifts for big-picture thinking and storytelling. Meyer said, "There's no doubt in my mind that he's one of the best thinkers in the business."



Erik Madigan Heck for The New York Times

Jack Bogle, the founder of Vanguard, who noted that Grantham “ran money for Vanguard for a while, and it didn’t work out that well,” says of him: “He’s been very, very good in his forecasts. In times of great bullishness, he’s the skunk at the garden party, and in times of bearishness, he’s saying, ‘Don’t give up.’ ”

Grantham’s quarterly letters often do make predictions about how the market will perform in the near future and recommend moves investors can make right now, but there are plenty of other authoritative voices telling us whether the recovery will continue or how the S&P will do this year. What sets him apart is what Ritholtz calls “the view from 40,000 feet up.” Grantham, the public face of a company that manages more than \$100 billion in assets, the very embodiment of a high-finance insider in blue blazer and yellow tie, has serious doubts about capitalism’s ability to address the biggest problems facing humanity. When he reminds us that modern capitalism isn’t equipped to handle long-range problems or tragedies of the commons (situations like overfishing or global warming, in which acting rationally in your own self-interest only deepens the harm to all), when he urges us to outgrow our touching faith in the efficiency of markets and boundless human ingenuity, and especially when he says that a wise investor can prosper in the coming hard times, his bad news and its silver lining come with a built-in answer to the skeptical question that Americans traditionally pose to egghead Cassandras: *If you’re so smart, how come you’re not rich?*

**The first time we met**, in May, Grantham said, “The rather burdensome thought is that people won’t listen to environmentalists, but they will sometimes listen to people like me.” We were in his office at GMO, on Boston’s downtown waterfront. Leaning forward in his chair by the windows, he rested his left hand in a confiding gesture on the forearm of a stone Buddha from the eighth-century temple complex at Borobudur in Indonesia. The statue was too pricey when he first saw it at an auction house, but after the Asian financial crisis devalued the asset class of regional antiquities, he made a lowball offer that was immediately accepted, which means, he said, he could have had it for even less. Behind Grantham and the semi-discount Buddha, jets climbed away from Logan Airport. Docked at Rowes Wharf, just below his windows, were yachts worthy of James Bond villains.

Grantham leads what he calls “a reasonable fat-cat existence” — 10-year-old Volvo station wagon, 40-year-old 12-foot Boston Whaler, a country place near the ocean. “But it’s very important to me to make a lot of money now, much more than when I was 40 or 50. Other than what I need for living, it all goes into the foundation.” The Grantham Foundation for the Protection of the Environment tries to raise public awareness of environmental issues and to promote collaboration within the environmental movement. It supports the Environmental Defense Fund, the World Wildlife Fund and other such organizations, institutes for



the study of climate change that Grantham helped establish at Imperial College London and the London School of Economics and the Metcalf Institute, which awards the \$75,000 Grantham Prize for Excellence in Environmental Journalism.

“We’re all involved in environmental causes,” Grantham said of his family. “We can’t recall some single moment of conversion. We found our separate ways to it.” His wife, Hanne, sits on the board of the E.D.F. One son, Oliver, buys forests for Harvard Management Company; another, Rupert, manages forests in Massachusetts; his daughter, Isabel, helps run an E.D.F. program that recruits summer interns from top business schools to improve companies’ energy efficiency.

Grantham put his own influence and money behind the climate-change bill passed by the House in 2009. “But even \$100 million wouldn’t have gotten it through the Senate,” he said. “The recession more or less ruled it out. It pushed anything having to do with the environment down 10 points, across the board. Unemployment and interest in environmental issues move inversely.”

Having missed a once-in-a-generation legislative opportunity to address climate change, American environmentalists are looking for new strategies. Grantham believes that the best approach may be to recast global warming, which depresses crop yields and worsens soil erosion, as a factor contributing to resource

depletion. “People are naturally much more responsive to finite resources than they are to climate change,” he said. “Global warming is bad news. Finite resources is investment advice.” He believes this shift in emphasis plays to Americans’ strength. “Americans are just about the worst at dealing with long-term problems, down there with Uzbekistan,” he said, “but they respond to a market signal better than almost anyone. They roll the dice bigger and quicker than most.”

Not that it’s always easy to derive usable market signals from Grantham’s letters. Ben Inker, GMO’s head of asset allocation, told me: “Just because he’s right and we know something’s going to happen doesn’t mean that we have a brilliant way to make money on it right now. In this industry people want to be right this quarter. Often, they read the letter, and they’re wondering, What would we do about that?”

But among the ways investors might respond to limited resources, beyond simply trying to grab up a lot of what Grantham calls “stuff in the ground,” are many that also address climate change: for instance, investing in farms and forests managed for the long haul, or in companies that retrofit buildings for energy efficiency, build ultralight vehicles or develop non-hydrocarbon-based power.

“There’s an 80-20 overlap between sensible behavior on resource limitation and sensible behavior on climate change,” Ramsay Ravenel, the executive director of the Grantham Foundation, says.

“A lot of his audience isn’t that receptive to messaging on the world’s environment going to hell, but they are receptive to resource limitation.”

Fred Krupp, president of the Environmental Defense Fund, says: “E.D.F. is educating people that dealing with climate change will be good for the economy and job creation. One of Jeremy’s insights is that we can make headway on the market side because higher commodity prices will enforce greater efficiency.”

Grantham says that corporations respond well to this message because they are “persuaded by data,” but American public opinion is harder to move, and contemporary American political culture is practically dataproof. “The politicians are the worst,” he said. “An Indian economist once said to me, ‘We have 28 political parties, and they all think climate change is important.’ ”

Whatever the precise number of parties in India, and it depends on how you count, his point was that the U.S. has just two that matter, one that dismisses global warming as a hoax and one that now avoids the subject.

Grantham and his wife, Hanne, near Grand Teton National Park in Wyoming. Photograph From Jeremy Grantham

**Grantham describes himself** as “an Americanized Englishman with an ancient green card”: he was raised partly by his grandparents, a Quaker shopkeeper and a former housemaid, in Doncaster, a coal-mining town in South Yorkshire. He attended the University of Sheffield and then Harvard Business School. “I was brought up to esteem value,” Grantham said. “I had a burst of euphoria, after which I returned to my upbringing.”

That “burst of euphoria” refers to a formative experience. In the summer of 1968, two years out of business school, he invested in American Raceways, a big-talking company that owned a single racetrack. “There was a bubble in ’68-’69 in tiny little companies,” he said. “It was \$7 a share in June. When I came back from

vacation, it was \$21, so I sold everything else and bought 600 more shares. By Christmas the price was at \$100. I jumped off when it fell to around \$40,” but he plowed all the money directly into another exciting little company, which tanked, cleaning him out. “It was the double whammy that taught me the lesson,” he said.

Grantham, who says that “*this time it’s different* are the four most dangerous words in the English language,” has become a connoisseur of bubbles. His historical study of more than 300 of them shows the same pattern occurring again and again. A bump in sales or some other impressive development causes people to get excited. When they do, the price of that asset class — South Sea company shares, dot-coms — goes up, and human nature and the financial industry conspire to push it higher. People want to hear good news; they tend to be bad with numbers and uncertainty, and to assume that present conditions will persist. In the financial industry, the imperative to minimize career risk produces herd behavior. As John Maynard Keynes, one of Grantham’s heroes, put it, “A sound banker, alas! is not one who foresees danger and avoids it, but one who, when he is ruined, is ruined in a conventional and orthodox way along with his fellows, so that no one can really blame him.” All these factors contribute to a surge of what Keynes called “animal spirits,” which encourages people to convince themselves that this time prices will just rise and rise.

So it's news when Grantham, who has built his career on the conviction that peaks and troughs will even out as prices inevitably revert to their historical mean, says that this time it really is different, and not in a good way. In his April letter, "Time to Wake Up: Days of Abundant Resources and Falling Prices Are Over Forever," he argued that "we are in the midst of one of the giant inflection points in economic history." The market is "sending us the Mother of all price signals," warning us that "if we maintain our desperate focus on growth, we will run out of everything and crash."

The letter is 19 pages long and dense with figures, but here's the short version: "The prices of all important commodities except oil declined for 100 years until 2002, by an average of 70 percent. From 2002 until now, this entire decline was erased by a bigger price surge than occurred during World War II. Statistically, most commodities are now so far away from their former downward trend that it makes it very probable that the old trend has changed — that there is in fact a Paradigm Shift — perhaps the most important economic event since the Industrial Revolution."

When prices go up and stay up, it's not a bubble. Prices may always revert to the mean, but the mean can change; that's a paradigm shift. As Grantham tells it, oil went first. For a century it steadily returned to about \$16 a barrel in today's currency, then in 1974 the mean shifted to about \$35, and Grantham believes it has recently doubled again. Metals and nearly everything else — coal,

corn, palm oil, soybeans, sugar, cotton — appear to be following suit. “From now on, price pressure and shortages of resources will be a permanent feature of our lives,” he argues. “The world is using up its natural resources at an alarming rate, and this has caused a permanent shift in their value. We all need to adjust our behavior to this new environment. It would help if we did it quickly.”

Grantham is taking the Malthusian side in an ongoing debate about growth and commodity prices. The argument often circles back to the bet made in 1980 between the biologist Paul Ehrlich, who foretold catastrophic scarcity caused by overpopulation, and the economist Julian Simon, who argued that any short-term increase in resource prices caused by population growth will stimulate inventors and entrepreneurs to find new ways to exploit those resources, lowering prices in the long run. The two men picked five commodities and wagered on whether their prices, taken as an indicator of scarcity, would be higher or lower in 1990. Simon won, 5-0, even though the world’s population grew by 800 million during that decade.

Malthusians have been trying to live down that defeat ever since, but, as Grantham points out in his July letter, if we extend the original bet past its arbitrary 10-year limit to the present day, *Ehrlich* wins the five-commodity bet 4-1, and he wins big if the bet is further extended to all important commodities. Grantham concludes that the longer-run story of the bet “proves, in fact, both

that man is mortal and must make short-term bets, and, more importantly, that Ehrlich's argument was right (so far)." That final parenthesis, a nod to uncertainty, leaves open the remote possibility that the apparent paradigm shift might still turn out to be just a bubble in commodity prices.

**Grantham has often** been early, the besetting sin of the value investor. Sounding the alarm and bailing out well before the peak of one bubble after another has cost him profits and clients. But if he's right again and early again in identifying rising commodity prices as not just another bubble but as a paradigm shift with far-reaching consequences, then he's giving us a little more time to come up with thoughtful, humane responses — not that he expects us to.

"But it's never absolutely too late," Grantham said. "It's never too late to do what we can," which includes making a lot of money you can use to try to protect whatever and whoever matters to you — biodiversity, family, nation, everybody.

He's an impassioned environmentalist not only for the usual reasons but also because he believes humanity's vexed relationship with the planet is the great economic story of our time. "This commodities thing may turn out to be the most interesting call of my career," he told me. "I have no doubt we're



going to have a bad hundred years. We have the resources to gracefully handle the transition, but we won't. We apparently can't."

The stakes couldn't be higher. Grantham doesn't dwell on the potential for disaster on an unimaginable scale, but it looms behind his measured language. The world's population is seven billion and counting. "Whether the stable population will be 1.5 billion or 5 billion," he said to me, "the question is: How do we get there?"

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