

**PART I**  
HOW TO APPROACH THE  
NEXT TWENTY YEARS

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## CHAPTER 1

# THE COMING STORM

**I**n 2008 and 2009, economic activity in the United States and most other developed nations tumbled off a cliff. At several points there was real panic in the air. Stock markets around the world fell to levels that wiped out more than a decade of gains. Trillions evaporated in the housing market, and global trade plummeted.

Questions remain: *What happened? Where did all our money go? How did 10 years of wealth accumulation evaporate so quickly? More important, when can we expect a recovery?*

In truth, our predicament goes far deeper than even these recent, disquieting economic events might suggest. It's time to face the facts: A dangerous convergence of unsustainable trends in the economy, energy, and the environment will make the "twenty-teens" one of the most challenging decades ever. *The Crash Course* explains this predicament and provides sufficient context to support the idea that it is well past time to begin preparing for a very different future.

The entire developed world is entering this next period of time in a severely weakened financial state. The United States, in particular, is carrying excessive levels of debt and unfunded liabilities and is further burdened by a national failure to save and invest in infrastructure. But the issue is not limited to the United States; every nation will eventually have to face the same realities posed by limited and limiting resources.

As a society, our imagined responses to the future make the implicit assumption that we will always remain within a complex economy that is capable of operating in an effective and orderly manner. *The Crash Course* asks the question, *What if this assumption is untrue?* and provides both data and ideas to support the conclusion that the economic status quo cannot be taken for granted, at least not in the form to which we've become accustomed.

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Even if the only task ahead of us were attend to the numerous economic mistakes of the past several decades, we would still find this next incarnation of our economy to be extremely difficult. But there are other factors at work.

The big story is this: The world has physical limits that we are already encountering, but our economy operates as if no physical limits exist. Our economy requires growth. I don't mean that growth is "required" as if it's written in a legal document somewhere, but it is "required" in the sense that our economy only functions well when it's growing. With growth, jobs are created and debts can be serviced. Without growth, jobs, opportunities, and the ability to repay past debts simply and mysteriously disappear, causing economic pain and confusion.

In the near future, humanity as a species will have to grapple with a condition that it has never faced before: Less and less energy will be available each year. In the past, there was always another continent brimming with energy resources to tap; another well that could be drilled; more hydrocarbon wealth that could be brought up from the depths. We have always had access to increased resources when we wanted them, and during that long run of history, we have fashioned an enormously complicated society and global economic model around the idea that there always would be more.

Along the way, we moved from burning wood to burning coal, then to whale oil, and then to petroleum. The unanswered question is this: *After oil, what comes next?* What is the next source of energy? Nobody has a truly viable answer for that as we cross the threshold of Peak Oil, a concept that represents the moment after which slightly less and less energy comes up out of the ground for us to use as we wish. Many hold out hopes that technology will ride to the rescue, perhaps in the form of nuclear power, natural gas, or alternative sources of energy. But the issues of time, scale, and cost loom large, because we have taken so long to finally recognize the imminence and severity of the petroleum predicament.

With a peak in energy extraction, a host of environmental issues suddenly come into play. Agricultural soils that were forced to produce higher yields via the continuous application of fertilizers derived from fossil fuels will turn out to have been fundamentally depleted. Minerals of increasingly dilute concentrations that require more and more energy to produce will suddenly cost exponentially more each year to extract and process. Where markets once allocated our energy resources according to ability to pay, true scarcity will soon form the dividing line between economic progress and decline for the world's various nations. How soon will all of this happen? If not this

year, then within 20 years, which is a blink of an eye given the scale and scope of the potential disruptions implied by this structural shift.

It is only when we assemble the challenges we find in the economy, energy, and the environment—what I call “the three Es”—into one spot that we can fully appreciate the true dimensions of our predicament. The next 20 years are going to be shaped by fundamental resource scarcity in ways that we have never experienced in history. The developed world is entering this race economically handicapped, with no one to blame but itself.

The primary question is whether we want our future to be shaped by disaster or by design. The set of predicaments and problems that we now face are very different from the conditions of the past 20 years and therefore present a solid challenge to the existing status quo. Those currently wielding power and influence are most likely to defend the status quo, raising the risk that our future will consist more of disaster than design. Further, abrupt changes have the unfortunate tendency of escaping notice by the majority of people, who have been conditioned to expect that the future will resemble the past. This is a perfectly valid assumption for ordinary moments, but it is a liability during extraordinary times.

A lucky few will see the changes coming ahead of time and seize the opportunity to make a more gentle series of adjustments on their own terms, while most will be caught unawares and have a much rougher period of transition. Fortunately, by examining and understanding the ways in which the economy intersects with and depends upon energy and other resources from the environment, it is possible to safely navigate and even predict the coming changes.

That is where *The Crash Course* comes in. I will teach you the system of thinking that I used to foresee the financial difficulties of 2008 and 2009 years in advance. Not only did I survive the great credit crunch of those years, I advanced my wealth handily, beating the meager returns that stocks and bonds would have offered.

Because I am discussing subject matter of a serious nature, I may seem to be delivering a doom-and-gloom message. But truthfully, I consider myself to be a “realistic optimist.” The spirit and intent of *The Crash Course* are to help you see the options and opportunities in this story of change. I have created a better life for myself and my family through the insights developed from this work. You can, too.

The mission of this book is larger than helping people build more resilience into their lives and portfolios. At our current pace, we are on track to leave behind more than a few predicaments for our children, as part of a substantially degraded world with fewer opportunities than we ourselves

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were granted. If we make the right choices from this point forward, we have the opportunity to leave a very different legacy. That is what *The Crash Course* is about—helping us to individually and collectively understand that our choices matter significantly and that the time to make the right choices is running dangerously short.