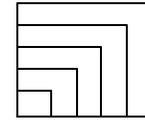


Game Over

By Stephen Leeb



Introduction

Three facts

1. Globally, capitalism is out of the bag.
2. Chindia has 25 cars/1000 while in the US it is 800.
3. Iran is growing at 6% a year and will soon become a net importer of oil.

Seven false assumptions in the US

1. Can always find more oil and minerals
2. Central banks can control inflation.
3. Economic growth will be perpetual.
4. America's wealth is based on enduring advantages that will ensure we will always have the top spot and control over key advantages.
5. The national debt is not a serious problem because we can pay it off with growth.
6. Technology will solve all our problems if we just feed it more money.
7. We can cope with short-term emergencies and needn't plan ahead.

Game Over is taken from a pinball machine metaphor.

[Summarizes his main argument.]

Even Friedman is naïve because our challenge has grown beyond the need to switch to alternative energies. 5
“It's this combination of resource shortages, impacting upon one another in a series of vicious circles that could bring our civilization down.” 6 It's the interactions. Like wind turbines requiring a lot of steel for construction.

Absolute Peak Oil and Absolute Peak Commodities: when it take more to produce it than the production yields.

Sees inflation of 25% or more, with intermittent recessions. Eventually global growth will hit resource constraints. Then sees rationing. Sees increasing resource scarcity.

“we think that society will be forced to become somewhat less complex than it is today, because simpler societies require less energy and fewer resources to support them.” 9

Could be a more feral world of wars over resources.

Recommends gold.

I. Resource Shortages: Facing Facts [The Challenge]

1. Oil: Racing to Run Out

The coming collision is between reality and a worldview that refuses to see reality. 13 [Are the external realities the biggest problems, or the psychological worldview and refusal to see or deal with reality?]

Earth's gas tank is half empty- and we have taken the good stuff or stuff easy to extract. [Does the present glut of oil in storage negate his argument?]

Contrasts Peak Oil and Absolute Peak Oil. Oil will exist, but be tantalizingly out of reach for practical purposes. [Is Exxon Mobil there now?]

The same things that make it essential to develop large scale alternative energy are the things that make it difficult to accomplish. 23

2. Vicious Circles: Oil, Metals, and Minerals

P “At present rates of consumption, we will run out of antimony, indium, lead, silver, tantalum, tin and uranium in the next four to twenty years.” 25 See table on p 26. [Is that a believable statement? What does it mean and imply?]

An Island Fable: interaction of fresh water, tar sands and minerals. “Trying to get enough of any one resource overtakes supplies of the other two.”

[In view of the book, how would you evaluate the Clunker program recently enacted?]

3. Water is a Commodity, Too

Water is a finite resource, and it takes a lot of water to produce energy, raw materials and derivative products.

Leeb’s perspectives on water don’t touch at all on individuals’ use of water or on the need for individual conservation. Is water supply primarily a problem that governments and experts resolve? If so, how does that affect the prognosis?

4. The Developing World

Because of the 2.4 b people, even a fractional increase in products/capita requires immense resources.

Chindia’s call on resources for its mfg sector now surpasses that of the US. 47

However, the chance that the developing world can reach this phase [of services starting to become more important than mfg] before the arrival of Absolute Peaks is virtually nil. 51

“Long before the developing world reaches parity with the developed world, oil will be largely unavailable.” 53

Using their own Resources: most of the world’s important store of oil and other resources are found in the developing nations – and they are going to keep them instead of export them. 54

Development in the Middle East and other countries could directly impair our well-being because they won’t export materials.

Chastises Friedman as being idealistic and ignoring the availability of resources.

5. The Curse and Cost of Complexity

Leeb foresees a dramatic reduction in what he calls complexity.

Complexity enables, but also is an overhead. Creates more interdependence and vulnerability.

Complexity costs are significant. People and institutions resist eliminating the complexity they have worked hard to create and in which they have a vested interest. Complexity may have to collapse of its own weight. 60 [Examples? How would that work?]

“Typically, when complex societies run low on resources, they undergo wholesale collapse, usually accompanied by large-scale violence and starvation.” 63 [How realistic and immanent is this picture?]

Taxes and govt are overhead complexities. [Will they increase or decrease according to his picture?]

[Leeb foresees a dramatic reduction in what he calls complexity. What does he mean by complexity? Does complexity always create vulnerability, or does it sometimes create reliability or dramatic and essential gains in efficiency necessary to cope with the shortages? How do you evaluate his arguments about complexity?]

6. Wall Street, Complexity, and the Shortfall in Resources

“Before the 1970s, the stock market and brokerage firms had very little to do with the production and marketing of oil. Today, however, there is no better example of the exponential growth of complexity and its associated costs than the many ways in which Wall Street complicates and inhibits the development of oil supplies.” 68

Same for alternative energy and other resources.

Companies dependent upon share price to secure capital from new offerings or from bonds. So the investment banks and Wall Street become very influential and Wall Street is very short-term oriented.

Lots of long, detailed reports with extensive legal teams and approval levels. Lots of roadblocks.

Oil firms can’t afford to risk in an uncertain project.

Average holding period for a stock down from 5 years to 10 months.

The futures market, instead of making for stable production costs for buyers and sellers, increases volatility. So the speculative price might be very different from the “real economic price.” 75

Speculators are necessary for liquidity.

[Might the short-term dynamics of the marketplace speed the necessary reactions and adaptations he describes?]

I. Meeting the Challenge

7. We Never Said It Would Be Easy

In 2007, the U.S. govt devoted 4.5b to energy research. About the same as 2 months in Iraq. It is not a priority. It trumps everything.

The market and profit motive won't do it. It needs a concerted govt action in 2 parts.

1. Figuring out what combination of alternative energies is most viable long-term when scaled up, given availability and interdependencies of commodities on which they depend. Looks at big picture.
2. Build and adapt the necessary infrastructure.

The govt outlays will precipitate inflation. Without it, we have inflation anyway because of commodity scarcities.

Denial of seriousness of the challenge a big challenge.

Science has become segmented into narrow specialties, each with their tunnel vision. 83

[Is he realistic about the capabilities of our government? One could easily argue that it is doubtful whether government or the free marketplace, each left to their own devices, is capable of responding according to the dimensions he sees as necessary. What kinds of models do we have or could we envision that would mobilize the kind of necessary changes?]

8. Alternative Energies

Two questions: 1) Does it produce a net energy gain? And 2) What other scarce natural resources go into particular alternative energies?

Critiques Friedman as ignoring the possible scarcity of required materials.

We don't have enough information yet to decide the best alternative, or combination of alternatives, to oil.

Tar sands fail on both of the above criteria. Won't scale to be significant. Shale is even worse.

Coal is past peak. Expensive to process. Priced at about the same as oil. 92

Nuclear has limitations: water and water sites, uranium prices very volatile, safety, waste storage.

Wind: Jacobson wrote in Science about wind power doing it all, including producing hydrogen to power cars. The rising costs of steel and building materials is making towers more expensive, not less expensive with volume.

[Nothing but pessimism here.]

9. More on Alternative Energies

Solar: Been growing, but still accounts for less than 1% of global energy consumption. 100

Solar Cells: Direct conversion to electricity. Silicon and mfg requires lot of energy and water.

Thin film photovoltaics: cheaper but less efficient.

Storage is a problem.

Not clear if produces more energy than require to mfg – the payoff curve unclear.

Shortage of tellurium a problem. Also tied to copper. Costs skyrocketing.

Solar Collectors

Geothermal: Easily accessible in only a few locations. Sees it coming out ahead of nuclear.

Biofuels and biomass: Ethanol competes with food and net energy benefit is low. Run out of phosphorous.

[Leeb downplays potential solutions from technological breakthroughs, either in physical processes or informational capabilities. He doesn't even mention biodiesel from algae or other breakthrough technologies. Is he merely being realistic, particularly in the time it takes for something to scale, or is he being unduly foreboding?]

Cars: Hydrogen won't do it. 109. [He doesn't even mention the production in Ohio of cars that produce and then burn hydrogen from a catalytic process. I invested a \$1,000 in the company.] It would take a tremendous amount of energy and materials to replace the 730 million cars in the world. Even with hybrids being the rage, annual sales are only 2% hybrid. The Volt proposed production is minuscule in relation to total auto sales. Lithium has safety and availability problems. Discusses natural gas powered cars. [Pretty bleak. Is it that bleak?]

10. Buying Time

Factors that alter supply or demand, such as greater efficiency or conservation, may not have the effect intended because of how variations affect price, which incentives to do or not do something. [We often overlook market, i.e. supply & demand, push and resistance, dynamics.]

Conservation would primarily be a diversion of other things that we need to be doing.

Sees promise in better information using the geologic data available to create more efficient exploration. Describes what sounds like a neural net.

[Is the window of opportunity because of commodity shortages as brief as he argues? What is the timeline you understand from him?]

11. Denial and Disaster

Because of denial, we are wasting precious time. It takes a crises. The Limits to Growth. 127

Categories of denial.

- a. Personal actions wouldn't much impact a global problem.
- b. Problem should be solved govt or new technologies, not indiv action
- c. Govt will counteract by being either incompetent or will push in opposite direction, so what is the use.
- d. Tragedy of the Commons. Grazing the commons. Individual self-interest opposes common interest.

May take a major, catastrophic event to crack denial.

[Should someone or some organization create the crises? What might it look like?]

[In this section of The Challenge, does he overstate the problem? If so, where?]

II. Economic Tsunami

12. The Inflation Bomb

"From now on, as resource prices go, so goes inflation." 138 [More data would help make the case.]

Outsourcing has helped curtail inflation, but effect has limited future potential.

Details why he sees inflation. Apart from rising price of commodities, and consequent wage expectations, the increased govt spending for defense and entitlements will cause inflation because neither directly contributes to economic growth. The dollar will fall, and may spiral at some point.

13. Inflation: Why the Old Solutions Will No Longer Work

"In any battle against rising inflation, the Fed has lost its chief weapon. And thus it will be forced to surrender to inflation rather than take a chance that could result in economic collapse." 154.

Scenarios:

Bad: Inflation to climb steadily.

Worse: Fed sets off a period of deflation with unemployment rising and home prices falling. This would require massive amounts of govt spending, and still face a shortage of energy and rising oil prices. More

swings than the bad scenario. Temporary reduction in commodity prices. Because commodity extraction would slow down, this would precipitate greater shortages.

Worst: Utter catastrophe, a self-feeding recession. Economic collapse around the world with social upheaval. “it will be essential to maintain, in the face of ever more severe economic turmoil, an absolutely clear-eyed commitment to alternative energies and an unflinching understanding of just what is at stake.” 163, chapter end. [Who needs to have this “clear-eyed commitment”?]

[Has the current recession and attendant reduction in oil and other resource demand helped the crises Leeb writes about, or only exacerbated the eventual crises?

[Have events since the book was published about a year ago confirmed or negated Leeb’s analysis?]

[Are “the problems we face immensely more complex and difficult to solve than almost anyone seems to get”? (3) If so, what will be the scenario going forward?]

[Why would you believe Leeb on inflation rather than Bernanke? Is Leeb correct in his analysis that the Fed cannot simultaneously deal with recession and inflation as it appears to be doing?]

[Is high inflation a virtual certainty as Leeb maintains? 159 If so, what controls the timing?]

III. Investments for a Chaotic World

14. Gold: Your Single Best Bet as the Commodity Crisis Unfolds

Inflation has stayed low because of cheap labor in the developing world, and because commodity prices have not yet controlled the economy. Both are about to change. 169.

He saw bond prices dropping in the near term. [That is slow to materialize.]

“Contrary to the assumptions of financial planners, however, the future seldom resembles the recent past.” 172.

Goes into case example of executive in 1965 planning for a 1981 retirement, and what would have happened given typical planning advice.

Diversification and bonds fail during periods of inflation.

“Deflationary periods will destroy the average citizen’s wealth even faster than inflation.” 177

Only gold has proven to withstand deflation and inflation, and is the most essential asset for the next decade which will be like the 70’s on steroids.

According to Gott’s formula that the longer something has been around, the longer it will be around, gold is 10x more likely to remain a viable financial asset than the dollar.

Gold will move higher as long as economy on tipping point between inflation and deflation.

For gold miners, recommends ABX, AEM, KGC.

Silver and platinum.

[He recommends gold. For most of us the only things you can do with gold are show it off as jewelry, make teeth out of it, or sell it. Seems like it is pretty ethereal stuff for a world that is going to need the nitty gritty. Might it be different this time?]

15. BRAC: Staying Afloat by Investing Abroad

The currency of a country blessed with the lion’s share of a key mineral would also gain in value, simply because every other nation would need that currency in order to buy the mineral. 190

Biggest gains from the 4 countries with the most surplus natural resource: Brazil, Russia, Australia and Canada. The main advantages of India and China are cheap labor, which will not last. However, Chindia currencies are grossly undervalued. The BRAC nations will enjoy lower and more predictable costs, stronger growth, lower inflation and rising currency values. 191

Country ETFs best way to play it. Australia and Canada safer investments than Brazil and Russia.

Big mining companies, such as BHP and Rio Tinto(RTP), Southern Copper (PCU).

Invest in oil service companies more than oil companies themselves.

XTO in the US.

The defensive sectors will make poor defensive investments in an inflationary environment.

Defensive: Berkshire Hathaway (BRK/B)

Zero coupon bonds for defense against deflation.

[I think he is right that investing in the future is all about currencies.]

[Why does he ignore Norway? What if a country's currency is already overvalued?]

16. Investing in the New Resource War

Goulish as it seems, this new arms race is good news for defense stocks.

Northrop Grumman (NOC) and Raytheon (RTN)

Earnings of defense contractors assured no matter what happens in the market.

[Leeb sees a strong future for defense. The U.S. intervention in energy-rich Iraq might be an example. Yet, if we had not intervened, the oil infrastructure there might have been left intact and Hussein might still be selling us oil. Do you think a more economically interdependent world with corporations having international scope produce a world with less military intervention than the scenario he envisions?]

[Why does he ignore personal defense?]

[Have you ever lived or traveled in a "buttoned down", high-secured country that was prosperous?]

17. Investing in the Solutions

Many small alternative energy companies with a good story, but no history of profits.

But the strongest players in the sector, while avoiding companies that are technology specific.

Most speculative of suggestions in this book: Exelon (EXC) FPL Group (FPL), Gamesa (GCTAF) Ormat Technologies (ORA) Sasol (SSL) and Vesta (VWSYF).

Engineering and construction industries for infrastructure building. Fluor (FLR)

Water: Veolia (VE) and ITT.

[Big forecasters such as Harry Dent have been notoriously poor investors, at least in terms of returns. According to Hulbert's Financial Digest, as of June 30 the average annual rate of return for Leeb's The Complete Investor portfolios was 13.1% YTD and 3.6% over five years. Since 2/28/04 when HFD started tracking, the return rate has been 3.8% compared to -1.5% for the market benchmark, or beating it by 5.3% a year.

- a. Why isn't someone with such clarity of analysis able to achieve better returns?
- b. How does one invest given the uncertain timing and evolution of large-scale economic changes?
- c. Is now the time to follow his recommendations?
- d. Should that be the whole allocation, as he advocates by arguing against diversification?]

18. Our Best Hope: A Flatter World After All

In time, the world will have no choice but to become less complex. 223

"the necessary decline in complexity, coupled with the immense task of developing alternative energy, will totally change the pathways that lead to financial success in the future." As inflation rises, profits in the stock market will dwindle. 226

Is optimistic about financial future for skilled workers, as well as trade schools. Liberal arts will decline.

Inflation will wipe out debt, which will be a boon to many.

"In time, our complex, information-based economy will revert to a more industrial one." 230 Income differences will be reduced.

"Unrestrained capitalism will bring about the Tragedy of the Commons scenario, in which individual agents, pursuing their own self-interest, destroy the resource base and bring about a total economic collapse." 231

[Good summary statement.]

Government will need to play a bigger role in the economy.

The crises is for the next decade. Things could be pretty good after that.

[So how fast is it playing out? Can we see the storm clouds, or are they merely on the weather forecast?]

[If the challenges are going to be getting through denial, understanding psychology and sociology, and workable organizations (private or public), are we going to be more in need of liberal arts and social science students than ever?]

[It would seem that the scarcity of resources will affect some areas dramatically, such as the travel budgets of large organizations. How will the low cost of data and information contribute to a world of simplicity in things, but complex and efficient in other ways? How does his case for less hierarchy and less complexity hold up in view of an information society?]

[If “a rising tide raises all boats,” does a sinking tide lower all boats? To what extent should we rely on

- civic and collaborative efforts versus
- creating a self-sustaining enclave somewhere or
- trying to find the profitable niche?
-