How soveign collapse cascades down the supply chain to you

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A skydiving student asked his instructor, "How long do I have to open my parachute?" The instructor replied, "The rest of your life." Preparing for collapse you have just as long!

This article The Joy of National Default by collapsologist Dmitry Orlov explain why sovereign debt may appear impossible for years then happen overnight, and the business, political and social collapses that may follow a financial one.

> Sovereign debt default is not some sort of spring shower that passes and then the sun comes out again. If Korowicz is right (*Trade-Off: Financial System Supply-Chain Cross-Contagion*)—and he appears to have done his homework—then at some point what is now still a gradual process will lead to a sudden, irreversible, catastrophic disruption of daily life. (And looking at the reports coming out of Greece and Spain, imagining such a scenario no longer requires much of an imagination.) Korowicz does not have a lot to offer when it comes to practical adaptations to survive such a systemic breakdown, beyond stating the obvious, which I will repeat: **"Initially the most exposed would be those with little cash at hand, low home inventories, mobility restrictions and weak family and community ties." In other words, be prepared, and do your best to give yourself a chance.**
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> Korowicz carefully goes through the process by which financial failure causes an instant breakdown in commerce. Cargos have to be financed. This is done by banks on opposite sides of the planet that are willing to grant and to honor letters of credit, which are paid once the cargo is landed. If letters of credit cannot be obtained, cargo does not move. In a crisis, banks mistrust each other, and denying letters of credit is one of the easiest ways for them to decrease their exposure to counterparty risk (the chance that the buyer's bank, which drew up the letter of credit, won't be able to make the payment). In turn, missing shipments mean empty supermarket shelves within days, idled production at factories due to missing components, standstills at construction sites and maintenance operations, hospitals running out of drugs and supplies and so on.
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> Within a week, local fuel inventories are depleted and transportation is disrupted. Modern manufacturing and distribution networks rely on a global supply chain and very thin, just-in-time inventories. High-tech manufacturing is most easily disrupted, because key components have just one or two suppliers, and little or no possibility for substitution. Experience of various disruptions (Japanese tsunami in 2011, Eyjafjallajökull volcano eruption in 2010) shows that the impact of a disruption does not scale linearly with its length but accelerates—and recovery takes disproportionately longer. Within a month or so the electric grid collapses due to lack of supplies and maintenance; it is probably at this point that recovery becomes impossible.
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> But even before that point the contagion will start to feed on itself. The region of negative feedback where homeostasis is maintained is surrounded by regions of positive feedback where the system is driven further and further from equilibrium. For example, "The financial system... would not just be collapsing because of unsustainable levels of debt-to-income, but because that income would be collapsing as production halted and its future prospects turned dire." (p. 69) Nor would the economy of goods and services be spared similar degenerative processes: "One would expect a massive reorientation away from discretionary consumption towards primary needs—food, essential energy, medicine and communication." (p. 62) As a result, many businesses would fail, further depressing demand, while maintenance would be deferred to the point where much of the infrastructure becomes non-functional.
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> [you only have to visit or read about Argentina's current situation to see where we are headed]
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> Much of that infrastructure is designed for a growing economy as well, and will become a millstone around our necks: in a shrinking economy, the fixed costs of existing critical infrastructure give rise to *negative* economies of scale, making extensive infrastructure unaffordable at any level. The global aspect of the global economy would be perhaps the fastest to disappear: citing the evolutionary economist Paul Seabright, Korowicz writes: "Trust between unrelated strangers outside their own tribal grouping cannot be taken for granted." (p. 23) Trust between strangers builds up slowly but is lost rapidly. In a shrinking economy, "taking care of one's own" becomes more important than maintaining a trust relationship with strangers across the world.

The opposite viewpoint can be, and is expounded by Korowicz and others, but has the drawback of being rather highly intellectual and abstract, offering little that is experiential or intuitive. This makes the exposition less than optimally effective for many people. Most people look out the window and see cars driving around and people going in and out of banks and shops and offices. But to really understand what underpins the stability of this scheme we have to be able to see, with our mind's eye, a dynamic system that can maintain homeostatic equilibrium and recover from shocks when all of its parameters remain within a certain range.

Let's try a simple metaphor. Suppose you are sitting in the kitchen. On a saucer in the middle of the kitchen table is a pretty blue marble. You are in an earthquake zone. As tremors hit, the marble rolls around the saucer, but it never rolls out of the saucer. This is a dynamic system within its stability range. But then a bigger shock hits, a chunk falls out of the ceiling and smashes the saucer, the marble skitters off the table, rolls through the gap under the door, down the stairs, down the street, and falls into a storm drain. In other words, the system takes small shocks in stride, but big shocks destroy it completely. Where the dividing line between small and big shocks runs—nobody really knows, but that doesn't matter provided we know that the shocks are only going to get bigger. And we do know that.

Now let's tackle a bigger dynamic system: global finance. At this point in time, all of the highly developed economies are 1. very highly indebted and 2. are either shrinking or not growing. This is not a stable situation: “Because credit is charged at interest, credit expansion is required to service previously issued credit. In order for the issued credit-money to retain its value relative to goods and services in the economy, GDP must increase commensurate with credit-money expansion.” (p. 33) The end result of this process is national default. At this time, the fact that Greece is in some stage of national default is no longer controversial. Nor does it appear likely that the problems of Spain, Italy or Ireland can be sorted out.

Nor is it likely that growth will resume. First, there is the problem with natural resources, oil foremost among them. It is too expensive to allow growth, and it can't get any cheaper because the remaining marginal resources are, well, marginal—deep water, tar sands, shale oil and other dregs—and are expensive to produce. Second, there is a problem with levels of debt: too high a level of debt chokes off economic growth. Third, we are at a point now where it is not possible to stimulate growth: the latest figures are that it takes a 2.3-fold increase in debt to produce one unit of GDP growth. We have achieved diminishing returns with regard to growth: we need to dig a bigger hole in which to put all this debt, and are willing to go deeper into debt to do it, but no matter how fast we dig, the debt just keeps piling up next to the hole. The politicians still talk about growth, but it's a race to nowhere.

At 78 pages of scholarly, somewhat jargon-laden prose, *Trade-Off: Financial System Supply-Chain Cross-Contagion* by David Korowicz is not quick reading, nor is it light reading, but it is important reading. It puts a lot of definition to the concept of cascaded failure, in which financial collapse inexorably leads to political and economic collapse with no possibilities for arresting this process or even altering its course. This may seem like a terribly pessimistic message, and, indeed, it is hard to imagine that it would provoke a cheerful reaction in any sane person. But for those who feel that it is important to understand what is unfolding, Korowicz offers a large dose of realism. Still, a fair warning is called for: “Abandon all optimism all ye who enter here!”