Economic Singularity

By John Mauldin | October 15, 2012

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"Concern about politics and the processes of international co-operation is warranted but the best one can hope for from politics in any country is that it will drive rational responses to serious problems. If there is no consensus on the causes or solutions to serious problems, it is unreasonable to ask a political system to implement forceful actions in a sustained way. Unfortunately, this is to an important extent the case with respect to current economic difficulties, especially in the industrial world.

"**While there is agreement on the need for more growth and job creation in the short run and on containing the accumulation of debt in the long run, there are deep differences of opinion both within and across countries as to how this can be accomplished.** What might be labelled the 'orthodox view' attributes much of our current difficulty to excess borrowing by the public and private sectors, emphasises the need to contain debt, puts a premium on credibly austere fiscal and monetary policies, and stresses the need for long-term structural measures rather than short-term demand-oriented steps to promote growth.

"The alternative 'demand support view' also recognises the need to contain debt accumulation and avoid high inflation, but it pushes for steps to increase demand in the short run as a means of jump-starting economic growth and setting off a virtuous circle in which income growth, job creation and financial strengthening are mutually reinforcing. International economic dialogue has vacillated between these two viewpoints in recent years."

– Lawrence Summers, *The Financial Times,* October 14, 2012

There is indeed considerable disagreement throughout the world on what policies to pursue in the face of rising deficits and economies that are barely growing or at stall speed. Both sides look at the same set of realities and yet draw drastically different conclusions. Both sides marshal arguments based on rigorous mathematical models "proving" the correctness of their favorite solution, and both sides can point to counterfactuals that show the other side to be insincere or just plain wrong.

Spain and Greece are both examples of what happens when there is too much debt and austerity is applied to deal with the problem. One side argues that the cure for too much debt is yet more debt, while the other side seemingly argues that the cure for a lack of growth is to shrink the economy. It is as if one side argues that the cure for a night of drunken revelry is a fifth of whiskey while the other side prescribes a very-low-calorie diet of fiber and veggies.

Both sides have arguments that are intellectually appealing, yet both cannot be right at the same time. What I think we need to consider is the possibility that there is something that is happening outside of traditional economic theories, which will mean that following either traditional policy solution could lead to disaster.

But is there a third alternative? If we want to find one, the first thing we need to do is to properly diagnose the problem. In today's letter we begin to explore why the models aren't working. Sometimes the best way to understand a complex subject is to draw an analogy. So with an apology to all the true mathematicians among my readers, today we will look at what I will call the Economic Singularity. And maybe we'll have a little fun on the way. Let's jump right in.

The Economic Singularity

Singularity was originally a mathematical term for a point at which an equation has no solution. In physics, it was proven that a large enough collapsing star would eventually become a black hole so dense that its own gravity would cause a singularity in the fabric of spacetime, a point where many standard physics equations suddenly have no solution.

Beyond the "event horizon" of the black hole, the models no longer work. In general relativity, an event horizon is the boundary in spacetime beyond which events cannot affect an outside observer. In a black hole it is "the point of no return," i.e., the point at which the gravitational pull becomes so great that nothing can escape.

This theme is an old friend to readers of science fiction. Everyone knows that you can't get too close to a black hole or you will get sucked in; but if you can get just close enough, you can use the powerful and deadly gravity to slingshot you across the vast reaches of spacetime.

One way that a black hole can (theoretically) be created is for a star to collapse in upon itself. The larger the mass of the star, the greater the gravity of the black hole and the more surrounding space-stuff that will get sucked down its gravity well. The center of our galaxy is thought to be a black hole with the mass of 4.3 million suns.

I think we can draw a rough parallel between a black hole and our current global economic situation. (For physicists this will be a very rough parallel indeed, but work with me, please.) An economic bubble of any type, *but especially a debt bubble,* can be thought of as an incipient black hole. When the bubble collapses in upon itself, it creates its own black hole with an event horizon beyond which all traditional economic modeling breaks down. Any economic theory that does not attempt to transcend the event horizon associated with excessive debt will be incapable of offering a viable solution to an economic crisis. Even worse, it is likely that any proposed solution will make the crisis more severe.

The Minsky Moment

Debt (leverage) can be a very good thing when used properly. For instance, if debt is used to purchase an income-producing asset, whether a new machine tool for a factory or a bridge to increase commerce, then debt can be net-productive.

Hyman Minsky, one of the greatest economists of the last century, saw debt in three forms: hedge, speculative, and Ponzi. Roughly speaking, to Minsky, hedge financing occurred when the profits from purchased assets were used to pay back the loan, speculative finance occurred when profits from the asset simply maintained the debt service and the loan had to be rolled over, and Ponzi finance required the selling of the asset at an ever higher price in order to make a profit.

Minsky maintained that if hedge financing dominated, then the economy might well be an equilibrium-seeking, well-contained system. On the other hand, the greater the weight of speculative and Ponzi finance, the greater the likelihood that the economy would be what he called a deviation-amplifying system. Thus, Minsky's Financial Instability Hypothesis suggests that over periods of prolonged prosperity, capitalist economies tend to move from a financial structure dominated by (stable) hedge finance to a structure that increasingly emphasizes (unstable) speculative and Ponzi finance.

Minsky proposed theories linking financial market fragility, in the normal life cycle of an economy, with speculative investment bubbles endogenous to financial markets. He claimed that in prosperous times, when corporate cash flow rises beyond what is needed to pay off debt, a speculative euphoria develops; and soon thereafter debts exceed what borrowers can pay off from their incoming revenues, which in turn produces a financial crisis. As the climax of such a speculative borrowing bubble nears, banks and other lenders tighten credit availability, even to companies that can afford loans, and the economy then contracts.

"A fundamental characteristic of our economy," Minsky wrote in 1974, "is that the financial system swings between robustness and fragility and these swings are an integral part of the process that generates business cycles." (Wikipedia)

But a business-cycle recession is a fundamentally different thing than the end of a Debt Supercycle, such as much of Europe is tangling with, Japan will soon face, and the US can only avoid with concerted action in the first part of the next year.

A business-cycle recession can respond to monetary and fiscal policy in a more or less normal fashion; but if you are at the event horizon of a collapsing debt black hole, monetary and fiscal policy will no longer work the way they have in the past or in a manner that the models would predict.

There are two contradictory forces battling in a debt black hole: expanding debt and collapsing growth. Without treading again on ground covered in many past letters, let's take it as a given that if you either cut government spending or raise taxes you are going to reduce GDP over the short run (academic studies suggest the short run is 4-5 quarters). To argue that raising taxes or cutting spending has no immediate effect on the economy flies in the face of mathematical reality.

Note that I'm not arguing for one approach or the other, just simply stating that there will be consequences, either way. The country might be better off with higher taxes and/or more spending, or the opposite. But those choices are going to have consequences in both the short and long term.

Second, there is a limit to how much money a government can borrow. That limit clearly varies from country to country, but to suggest there is no limit puts you clearly in the camp of the delusional.

The Event Horizon

In our analogy, the event horizon is relatively easy to pinpoint. It is what Rogoff and Reinhart call the "Bang!" moment, when a country loses the confidence of the bond market. For Russia it came at 12% of debt-to-GDP in 1998. Japan is at 230% of debt-to-GDP and rising, even as its population falls – the Bang! moment approaches. Obviously, Greece had its moment several years ago. Spain lost effective access to the bond market last year, minus European Central Bank intervention. Other countries will follow.

As an aside, it makes no difference how the debt was accumulated. The black holes of debt in Greece and in Argentina had completely different origins from those of Spain or Sweden or Canada (the latter two in the early '90s). The Spanish problem did not originate because of too much government spending; it developed because of a housing bubble of epic proportions. 17% of the working population was employed in the housing industry when it collapsed. Is it any wonder that unemployment is now 25%? If unemployment is 25%, that both raises the cost of government services and reduces revenues by proportionate amounts.

The policy problem is, how do you counteract the negative pull of a black hole of debt before it's too late? How do you muster the "escape velocity" to get back to a growing economy and a falling deficit – or, dare we say, even a surplus to pay down the old debt? How do you reconcile the competing forces of insufficient growth and too much debt?

The problem is not merely one of insufficient spending: the key problem is insufficient income. By definition, income has to come before spending. You can take money from one source and give it to another, but that is not organic growth. We typically think of organic growth as only having to do with individual companies, but I think the concept also applies to countries. The organic growth of a country can come from natural circumstances like energy resources or an equable climate or land conducive to agricultural production, or it can come from developing an educated populace. There are many sources of potential organic growth: energy, tourism, technology, manufacturing, agriculture, trade, banking, etc.

While deficit spending can help bridge a national economy through a recession, normal business growth must eventually take over if the country is to prosper. Keynesian theory prescribed deficit spending during times of business recessions and the accumulation of surpluses during good times, in order to be able to pay down debts that would inevitably accrue down the road. The problem is that the model developed by Keynesian theory begins to break down as we near the event horizon of a black hole of debt.

Deficit spending is a wonderful prescription for Spain, but it begs the question of who will pay off the deficit once Spain has lost the confidence of the bond market. Is it the responsibility of the rest of Europe to pay for Spain or Greece? Or Italy or France, or whatever country chooses not to deal with its own internal issues?

Deficit spending can be a useful tool in countries with a central bank, such as the US. But at what point does borrowing from the future (and our children) constitute a failure to deal with our own lack of political will in regards to our spending and taxation policies? There is a difference, as I think Hyman Minsky would point out, between borrowing money for infrastructure spending that will benefit our children and borrowing money to spend on ourselves today, with no future benefit.

In my mind I am playing reruns of old *Star Trek* episodes with Capt. Kirk shouting, "Dammit, Scotty, you've got to give me more power!" as they try to escape a looming black hole. Except, in our national version it's Paul Krugman playing Capt. Kirk (badly), demanding that Ben Bernanke provide even more QE and Congress more stimulus spending. (I should note that Paul Krugman, like myself, is a science fiction aficionado. That may be the one philosophical point, a singularity if you will, that we agree on.) Of course, the Republicans (Romney) are playing the part of Scotty, yelling back at Kirk, "Captain, I can't give you any more power! The engines are going to blow!"

The deficit has to be controlled, of course. To continue on the current path will only feed our Black Hole of Debt even more "mass," making it that much harder to escape from. But to try and power away (cutting the deficit radically) all at once will blow the engines of the economy. Suddenly reducing the deficit by 8% of GDP, either by cutting spending or raising taxes, is a prescription for an almost immediate depression. It's just basic math.

As I outline in my book *Endgame* (shameless plug), each country has to find its own path. But it's clear that Spain, like Greece, is simply going to have to default on part of its debt. So will Ireland and Portugal. Japan will resort to printing money in amounts that will boggle the imagination and terrify the world as they finally come to grips with the fact that they must deal with their deficit spending.

The Glide Path

The US still has the chance to pursue what I call the "glide path" option. We can reduce the deficit slowly, by say 1% a year, while aggressively pursuing organic growth policies such as unleashing the energy and biotechnology sectors, providing certainty to small businesses about government healthcare policies, reducing the regulatory burden on small businesses and encouraging new business startups, creating a competitive corporate tax environment (a much lower corporate tax with no deductions for anything, including oil-depletion allowances), implementing a pro-growth tax policy, etc.

We can balance the budget within five years. If the bond market perceived that the US was clearly committed to a balanced budget, rates would remain low, the dollar would be stronger, and we would steam away from the black hole. I would like to see something like Simpson-Bowles, with an even more radically restructured tax policy. Healthcare is clearly the challenge, but a compromise can be crafted, as has been demonstrated by the several bipartisan proposals that have been sponsored by conservative Republicans and liberal Democrats. The key word is *compromise.*

The crucial outcome in the wake of the upcoming election will not be whether we end up with a Republican or a Democratic budget, but whether we can achieve the compromise that will be needed to get us on a glide path to a balanced budget.

If a compromise is not crafted in 2013, how will one be crafted in 2014, which is an election year? 2015 may be too late, as the bond market will watch Europe and Japan implode and wonder why the US is any different. Remember, the event horizon is determined by the confidence of the bond market in the willingness and ability of a country to pay its debts with a currency that has a value that can be maintained. Trillion-dollar deficits for the next three years will call into question the value of the dollar. That will mean higher interest rates, which will mean a much bigger, more deadly black hole.

I should note that something similar to the glide path was tried during the Clinton administration. Spending growth was controlled, and the economy was allowed to grow its way out of debt. While the US economy is fundamentally weaker today than it was then, it should be possible for the US free-market economy to once again become an engine of growth.

I think the analogy of an Economic Singularity is a good one. The Black Hole of Debt simply overwhelms the ability of current economic theories to craft solutions based on past performance. Each country will have to find its own unique way to achieve escape velocity from its own particular black hole. That can be through a combination of reducing the debt (the size of the black hole) and fostering growth. Even countries that do not have such a problem will have to deal with the black holes in their vicinity. As an example, Finland is part of the eurozone and finds itself gravitationally affected by the black holes of debt created by its fellow eurozone members. And China has recently seen its exports to Europe drop by almost 12%. I would imagine that has been more or less the experience of most countries that export to Europe.

In science fiction novels, a spaceship's straying too close to a black hole typically results in no spaceship. There are also hundreds of examples of what happens to nations that drift too close to the Black Hole of Debt. None of the instances are pretty; they all end in tears. For countries that have been trapped in the gravity well of debt, there is only the pain that comes with restructuring. It is all too sad.

Speaking on Alternatives

If I am right about there being an Economic Singularity, it will mean a rather uncertain market environment for the foreseeable future. I frequently speak on behalf of Altegris Investments at various investment conferences around the country. A week ago I was on an "alternatives" panel at the UBS National Conference in Orlando. In front of several hundred UBS advisors, I shared my expectations of prolonged market uncertainty and reinforced the importance of finding different sources of returns that have a low correlation to traditional investments. Many advisors are shifting more and more away from traditional stock and bond allocations towards alternative strategies. Others are just getting their feet wet.

I encourage advisors and individual investors to leverage off of Altegris's years of due diligence and ability to bring the very best active money managers to you and your clients, within one simple managed account and/or mutual fund. If you want to know more, you can visit the Altegris Academy at www.altegris.com. The Altegris Academy is a leading educational platform on alternatives, full of useful information for individuals and professionals alike.

I Was So Much Older Then, I'm Younger Than That Now

This weekend I went to my 40th class reunion at Rice University. It was good to catch up with old friends and hear how they are doing. I have to confess, I was surprised at the number of my contemporaries who have either retired or plan to do so soon. I had not personally confronted the idea of retirement, but the experience really got me to thinking about what will happen "after."

My 40th reunion coincided with the 100th anniversary of Rice University. There was a rather large celebration within a monster temporary building in front of the quadrangle. Inside the quadrangle (which is easily larger than a football field, surrounded by four-story Mediterranean-style buildings) a very impressive laser light and sound show was replayed every hour. About 9:30, I wandered over to the quadrangle from our private class party to take in the light spectacle. It was every bit as impressive as I had heard, but to see and hear the 100-year history of the university in 15 minutes compounded my sense of aging.

I wandered back to the party, only to find everyone gone. I had rather assumed we would be talking long into the night! Rather than walking back to my hotel, I decided to join the rather large party going on. I grabbed a Diet Coke, and seeing no one I knew, I sat down and simply observed the goings-on. While I recognized the dance music (although none of it was from the watershed decade of the '60s), I couldn't help but notice the different dance styles of the various generations present. Those in their 20s were clearly discernible from those in their 40s. And my generation was generally sitting it out on the sidelines or had evidently retreated to their hotels. This experience, along with seeing the frailty of my 95-year-old mother this past week, put me in a rather contemplative mood about time and life for the rest of the evening. Could my life be compressed into a five-minute light show? It all seems to happen so fast.

But then I woke up the next morning, jumped on a plane to go have lunch with my kids back in Dallas, and then sat down to write this letter. There's just too much to do to worry about getting older. That will happen soon enough, whether I worry about it or not. "Do not go gentle into that good night" seems to be an appropriate motto.

Tomorrow (which is already this afternoon) I am off to Chicago, where I will again speak for Jim Bisenius and Common Sense Investments (based in Portland). Jim was a gracious host in Portland last week, and as I noted in Outside the Box, the day spent hunting and fishing at his ranch was a very special time. I hope to repeat it again.

I should note that some of you might not have received Outside the Box as usual. We migrated servers and there were evidently a few glitches. If you did not get to read Dr. Gary Shilling's latest thoughts on deflation and my introduction to them, I encourage you to do so at mauldineconomics.com/outsidethebox/a-little-chronic-deflation.

Late Tuesday afternoon I fly to Atlanta to speak for Hedge Funds Care, at their annual charity event that benefits local children. I'll bet you can still get tickets, and I would love to see you there. (http://www.hedgefundscare.org/event.asp?eventID=74) .

Then Thursday I'm back home for 10 days – which will seem like R&R to me – before I head off to South America for two weeks. I will be speaking at three CFA events, in Sao Paulo, Montevideo (Uruguay), and Buenos Aires, with my South American partner, Enrique Fynn of Fynn Capital (http://www.fynncapital.com/). I'll also be meeting clients. Enrique always ensures that I have a good time and get to see a few things here and there.

Care to join me election night, November 6 ... in Argentina? As part of the trip, I'm stopping by for the season-opening celebration, November 5-10, of friend and partner Doug Casey's lifestyle and sporting estate, La Estancia de Cafayate, where I'll host the group at a café on the scenic town plaza and watch the election results roll in. If you'd like to join me and a group of interesting folks from around the world in what promises to be a unique experience, drop Dave Norden a note at LiveMore@LaEst.com. David Galland has promised nonalcoholic beers for me for the evening. The recent polls suggest I might want something stronger, but I think I can hold out.

The run of bad news from the family seems to be shifting for the better lately, and I am about ready for nothing but good news for a very long time.

For the record, the term *singularity* was also used back in 1969 by my friend and Science Fiction Hall of Famer Vernor Vinge to refer to that moment in the future when our computers will take over their own programming and generally look after themselves (and us?). Beyond that point, we have really have no model for what will happen. Ray Kurzweil thinks the moment will arrive around 2045. It should be a fascinating ride.

Have a great week and enjoy the great fall weather.

Your ready for this singularity thing analyst,

John Mauldin

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