



The Misreading of Reinhart and Rogoff

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If the rallying cry for deficit reduction rests on an intellectual framework, it would be the work of Carmen Reinhart and Ken Rogoff, whose book, *This Time is Different*, has been hailed for its exhaustive historical study of financial crises. A key finding of those scholars – that economic growth slows once the ratio of debt-to-GDP exceeds 90% – has been widely cited by those calling for decreased government spending.

But those calling for deficit reduction have largely ignored a number of caveats that Reinhart and Rogoff gave with respect to their 90% threshold, and as a result many warn that the US faces the imminent danger of a Greek-like sovereign-debt crisis.

Take, for example, PIMCO's Bill Gross, who [wrote](#) the following on October 31 of last year:

The situation, of course, is compounded now by high debt levels and government spending that always used to restart capitalism's private engine. However, as economists Rogoff & Reinhart have shown in their historic text, *This Time Is Different*, sovereign debt at 80-90% of GDP acts as a barrier to growth.

First of all, Reinhart and Rogoff did not write about the 90% threshold in *This Time is Different*; they published research about that threshold only after the book was written, in two separate articles (found [here](#) and [here](#)).

The more important problem with the claims that Gross and others have made about the 90% threshold is that they ignored Reinhart's and Rogoff's own words of caution with respect to the special situation of the US, and they failed to consider the limits inherent in Reinhart and Rogoff's dataset of countries with high debt levels.

I spoke with Rogoff last week, and he explained that one of those limitations is the rarity of such high-debt events and the extreme rarity of examples of countries exceeding 120% of debt-to-GDP.

Rogoff did not comment on how others have interpreted his research, but I will. I will explain its limitations and caveats, and then turn to the decisions policymakers should make in the context of our growing fiscal deficit.

What Reinhart and Rogoff did and did not say

Let's look at what Reinhart and Rogoff said in the two papers cited above. Using the same data that they used in *This Time is Different*, which consisted of observations from 44 countries over the last two centuries, they found that there was very little relationship



between economic growth (as measured by GDP) and public (government) debt, for debt levels below 90% of GDP.

For advanced economies, however, Reinhart and Rogoff found that once debt exceeds 90% of GDP, median growth slows by roughly 1% annually. The data for advanced economies consisted of 1,186 annual observations, of which 96 were from countries with debt-to-GDP greater than 90%; most of those observations came in the immediate wake of World War II.

They also studied a smaller dataset of emerging markets, which incorporated both public and private debt. For those countries, growth slows even more drastically once total debt exceeds 60% of GDP. In addition, they studied the relationship between debt and inflation. But I will focus on the relationship between debt and GDP for developed economies, since that has the most direct implications for the US.

Reinhart and Rogoff stated that countries seldom grow their way out of debt. Many countries have approached a “debt intolerance” boundary, at which point “market interest rates rise quite suddenly, forcing painful adjustment,” they wrote.

It is this last point that has drawn the most attention. Many have interpreted this to mean that the 90% threshold is a barrier, above which growth slows, bond markets revolt and interest rates surge. For example, here is a [comment](#) Liz Ann Sonders of Charles Schwab made in April of last year:

We are about to cross a very important threshold where public debt becomes greater than 90% of GDP. That will happen this year. Reinhart and Rogoff have shown very clearly that, over the last several hundred years, that is an important threshold for the ability of economy to grow.

In a [report](#) published last week, the Boston Consulting Group made a nearly identical statement, and John Mauldin has [used](#) the 90% threshold to bolster his claim that we are at the end of a global “debt supercycle.”

In a *Business Week* [article](#) on July 14 of last year, Reinhart and Rogoff addressed this point:

We aren’t suggesting there is a bright red line at 90 percent; our results don’t imply that 89 percent is a safe debt level, or that 91 percent is necessarily catastrophic. Anyone familiar with doing empirical research understands that vulnerability to crises and anemic growth seldom depends on a single factor such as public debt. However, our study of crises shows that public obligations are often hidden and significantly larger than official figures suggest.



Rogoff confirmed this when I spoke with him. “90% is not an arbitrary number in this sense. It's rare to get above it, and above 120% is exceedingly rare,” he said.

Reinhart and Rogoff also distinguish between two independent debt levels: One when growth slows (90% of GDP) and a second unspecified “intolerance” level, when bond markets force interest rates higher and solvency is threatened. Many commentators (and perhaps the S&P ratings agency) fail to recognize this distinction, and wrongly conclude that the US faces the threat of insolvency. Japan, with debt-to-GDP of over 200%, clearly illustrates that the bond markets can tolerate slow growth well beyond the 90% threshold.

Any notion that 90% is a hard barrier imminently endangering the US economy is not supported by the authors' research.

Moreover, in my conversation with Rogoff, he explained that their research was about “correlation, not causation” and that there is a two-way relationship between debt and growth. Investment professionals know the dangers of relying on data relationships without a supporting theory; this is why we reject investment ideas built with back-tested data. Without an underlying theory, there is no reason to expect that the relationship will continue in the future.

Debt and growth are unquestionably linked on a theoretical basis. But a complete theory would incorporate more than just two variables (GDP growth and the debt-to-GDP ratio); it would consider other factors, such as interest rates and the nature of the deficit. When governments can borrow at near-zero long-term real interest rates, as the US can today, higher debt can be tolerated. In the case of the US, its status as reserve currency affords it even greater borrowing capacity.

Robert Lucas, who won the Nobel Prize in economics in 1995, called attention to the dangers of formulating economic policy based on observed historical data, especially the sort of highly aggregated data that Reinhart and Rogoff employed. This finding, known as the Lucas critique, led to the development of more sophisticated models that consider a broad range of underlying parameters.

I will come back to the important issue of how the nature of the deficit affects a country's borrowing capacity, but the key point is that bond markets charge higher interest rates to governments that spend wastefully. Rogoff concurred, and said “It is common sense that, if the government invests in productive infrastructure projects, then debt is more likely to be sustainable than if it dissipates the funds on consumption, although – as in the case of Japan – it's not always easy to distinguish the two.”

One final caveat bears mentioning with respect to Reinhart and Rogoff's findings. Because most of the incidences of high debt followed World War II, these were sustainable debts, they say, because “postwar growth tends to be high as wartime allocation of manpower and resources funnels to the civilian economy.”



But, as Columbia Professor Bruce Greenwald has [said](#), it was not the war efforts *per se* that allowed global economies to grow their way out of the Great Depression. Instead, it was the agrarian to industrial transformation of economies, and the migration of populations from farms to cities. Similarly, Great Britain faced debt-to-GDP in excess of 200% in the early 1800s (when the pound was the reserve currency), but grew its way out thanks to the Industrial Revolution. War is neither a necessary nor a key factor to facilitate growth in an era of high debt.

Policy implications

Our policy makers should take several lessons from this closer reading of Reinhart and Rogoff's assertions.

First, be very skeptical when someone says "growth slows once debt-to-GDP exceeds 90%." That finding is based on a limited data set which may have little relevance to the US today. Without an underlying theory, encompassing at a minimum interest rates and the nature of the deficit, the 90% threshold may be nothing more than correlation without causation. Our status as the reserve currency and our ability to borrow at exceptionally low long-term interest rates uniquely distinguish our circumstances.

The nature of the deficit matters. On this point, I am greatly persuaded by Woody Brock, who [distinguishes](#) between good and bad deficits. A bad deficit is one that does not lead to economic growth – interest payments and transfer payments from federal to state and local governments are clear examples. Of the \$787 billion stimulus plan [passed](#) in 2009, \$217 billion was for aid to state and local governments, and another \$120 billion was for relief, such as unemployment benefits.

A good deficit funds projects that support growth. As Brock has argued, our country needs high-speed rail, upgrades to our electrical grid and other infrastructure improvements. Only about 10% of the \$787 billion stimulus was spent on infrastructure, much of it on projects that would not meet Brock's high-growth criterion. Borrowing money to fund high-growth projects makes sense, but only if they are vetted by an independent source, such as an infrastructure bank, to ensure that they have a high return-on-capital. Spending money on projects that support the agenda of individual politicians or special interests leads to bad – not good – deficits.

If transfer payments are necessary – for example, to avoid painful cutbacks in public services – they can still be done by creating a good deficit. The federal government could stipulate that those payments would be conditional on certain reforms, such as replacing pension plans for newly hired public employees with defined-contribution plans. Public pension plans are a major source of financial instability and are vulnerable to the worst abuses of cronyism and political favoritism. Bond markets would surely react favorably to



this type of good-deficit spending, which would signal that the federal government is serious about addressing its long-term problems.

As Brock has said, “without public spending there is no way the private sector can bring things back to where they need to be.”

Lastly, don’t believe those who say there are no good alternatives or that the US faces a series of bad choices that involve painful delevering. There are good options, but they are not easy to implement. We need to heed the lessons of the Industrial Revolution and the Great Depression, and accept that our government must embark on a series of initiatives large enough in scope to restore the country to full employment.

One opportunity stands out – energy. As I have previously [written](#), we need an energy policy that realistically addresses the costs of pollution and the potential for global warming. Cap-and-trade is the ideal solution, and it would remove the uncertainty around pricing that hinders the development of alternative energy technologies. A proper energy policy, supported by good-deficit spending, would position the country for the inevitable decline in fossil-fuel supplies.

Another example of good-deficit spending was contained in the Simpson-Bowles plan, which both Reinhart and Rogoff have supported.

Reinhart and Rogoff’s title, *This Time is Different*, was intentionally ironic. Their message is that there has been an alarming consistency across financial crises – and that “this time” is never really all that different. A similarly alarming consistency is now shared by those who reject deficit spending and fear that our fate rests in the hands of the bond market vigilantes.

That pessimistic sentiment has descended to the depth of groupthink. Policy makers must recognize that this calls for leadership that questions the prevailing wisdom and embraces unconventional solutions. Let’s hope that our leaders recognize that it is not too late to grow our way out of debt.

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