



EJW

ECON JOURNAL WATCH
Scholarly Comments on
Academic Economics

Econ Journal Watch
Scholarly Comments on Academic Economics
Volume 9, Issue 1, January 2012

Editor's Notes 1-2

COMMENTS

The Unemployment Impact of the 2008 Extension of Unemployment
Insurance: As High as Robert Barro Suggested?
Steven D. Mullins 3-20

WATCHPAD

EJW-MERCATUS SYMPOSIUM

U.S. SOVEREIGN DEBT CRISIS:

TIPPING-POINT SCENARIOS AND CRASH DYNAMICS

Introduction to Symposium on U.S. Sovereign Debt Crisis:
Tipping-Point Scenarios and Crash Dynamics
Tyler Cowen 21-23

Some Possible Consequences of a U.S. Government Default
Jeffrey Rogers Hummel 24-40

The Bond Market Wins
Garett Jones 41-50

How a Default Might Play Out
Arnold Kling 51-59

Courting an Avoidable Financial Crisis
Joseph J. Minarik

60-70

How and Why a U.S. Sovereign Debt Crisis Could Occur
Peter J. Wallison

71-77



EJW

ECON JOURNAL WATCH
Scholarly Comments on
Academic Economics

ECON JOURNAL WATCH 9(1)
January 2012: 1-2

Editor's Notes: Acknowledgments 2010-11

I am grateful to the co-editors Bruce Benson, Fred Foldvary, George Selgin, and Larry White and the managing editor Jason Briggeman for all their fine work, and to readers for their interest and feedback.

We are grateful to Kevin D. Rollins for his friendship and frequent in-a-pinch consultation, to John Stephens for fine-tuning the superb website and document-production system that he created, and to Brett Barkley and Ryan Daza for ongoing occasional service to the journal.

For friendship and vital sponsorship, we are grateful to the American Institute for Economic Research, which officially sponsored the journal from December 2009 through August 2011.

We thank all those who have made donations to our project, and especially the Earhart Foundation, the Charles G. Koch Foundation, Joseph McLaughlin, Gerry Ohrstrom, and Lou Carabini for their faithful support. And we send a special thanks to Walter E. Williams for generous assistance.

We are grateful to the Atlas Economic Research Foundation for their friendship and in-kind support in housing EJW within their organization, especially Romulo Lopez and Brad Lips.

We thank the Mercatus Center at George Mason University for co-organizing and sponsoring the debt crisis symposium appearing in the present issue (January 2012), especially Tyler Cowen, who co-edited the symposium, and Rob Raffety.

We thank the following individuals for helping provide intellectual accountability to EJW:

Referees during 2010-11

Alberto Abadie	Harvard University
Lloyd Cohen	George Mason University
Tyler Cowen	George Mason University
Edward A. Dyl	University of Arizona
William B. Elliot	University of Texas, El Paso
Warren Gibson	San Jose State University

KLEIN

Peter Gordon	University of Southern California
Thomas Hazlett	George Mason University
Robert Higgs	<i>The Independent Review</i>
Ben Jacobsen	Massey University
Garett Jones	George Mason University
Richard Jong-A-Pin	University of Groningen
Arnold Kling	Mercatus Center at George Mason University
George Leef	John William Pope Foundation
Thomas C. Leonard	Princeton University
Robin Lindsey	University of British Columbia
Brian Lucey	Trinity College, Dublin
Bruce McCullough	Drexel University
Gregory Rehmke	Economic Thinking
Dani Rodrik	Harvard University
Alvin E. Roth	Harvard University
Philip A. Rothman	East Carolina University
James S. Taylor	College of New Jersey
Kurt Schuler	U.S. Department of Treasury
Jane Shaw	John William Pope Foundation
Alexander Tabarrok	George Mason University
David L. Weimer	University of Wisconsin
Robert Whaples	Wake Forest University

Replying Authors published 2010-11

Gauti B. Eggertsson	Federal Reserve Bank of New York
Haifang Huang	University of Alberta
Yao Tang	Bowdoin College

Other individuals who published comments on EJW material in EJW during 2010-11

C. Fred Bergsten	Institute for International Economics
Jeffrey Frieden	Harvard University
Charles Goodhart	London School of Economics
Steve H. Hanke	Johns Hopkins University
Roderick Hill	University of New Brunswick
Otmar Issing	University of Frankfurt
E.D. Kain	League of Ordinary Gentlemen
Peter B. Kenen	Princeton University
Daniel P. Kuehn	American University
Ronald I. McKinnon	Stanford University
David F. Ruccio	University of Notre Dame
George Selgin	University of Georgia
Roland Vaubel	University of Mannheim



The Unemployment Impact of the 2008 Extension of Unemployment Insurance: As High as Robert Barro Suggested?

Steven D. Mullins¹

[LINK TO ABSTRACT](#)

My calculations suggest the jobless rate could be as low as 6.8%, instead of 9.5%, if jobless benefits hadn't been extended to 99 weeks.

—Robert J. Barro, *Wall Street Journal* op-ed, August 30, 2010

The U.S. unemployment rate averaged 4.6 percent in the two years prior to the economy entering the 2008-09 recession and it more than doubled to 9.5 percent by the summer of 2010 when Robert Barro (2010) estimated how much of that increase was attributable to changes in unemployment insurance (UI) policy. His analysis suggested the recession was not nearly as severe as unemployment statistics suggested because more than half of the increase in the unemployment rate since the recession began was caused by an extension of UI. Barro believes the administration should reconsider extensions of UI benefits.

The unemployment insurance program is a perfect example of government policy that confronts the classic tradeoff between economic efficiency and equality (Okun 1975). The motivation behind the creation of the UI in 1935 was clearly a sense of compassion—to provide temporary help to those suffering income losses during a widespread economic downturn. But this compassion comes at some cost. Inefficiency can result as a consequence of subsidizing the very condition against which UI seeks to protect individuals. Economists have long accepted the theory and evidence that UI benefits are likely to cause extended durations of

1. Drury University, Springfield, MO 65802.

unemployment (Katz and Meyer 1990; Chetty 2008), and some have recommended that the resulting inefficiency is large enough to consider reducing the extent of UI benefits (Barro) or eliminating the current UI program altogether and replacing it with individually pre-funded savings accounts (Feldstein and Altman 1998).

The current recession, with its combination of historically long durations of unemployment (Farber 2011) and unprecedented extensions of UI benefits (U.S. Department of Labor 2011), has generated renewed interest in this policy debate. Proposals to scale back UI benefits are strengthened if recent extensions in the duration of UI benefits are found to have caused large and inefficient increases in the unemployment rate. On the other hand, if these extensions caused only modest increases in unemployment during a deep recession such as 2008-2009, a policy of limiting the extension of benefits may punish those individuals disproportionately suffering from the economic downturn while generating little gain in economic efficiency. Is Barro correct? Has UI caused large, unnecessary increases in unemployment during the Great Recession? What do the most recent data tell us about this important policy question?

Bhashkar Mazumder Estimates the Impact

A number of economists have recently attempted to measure the impact of the Emergency Unemployment Compensation program—created in the summer of 2008—on the national economy’s unemployment rate (U). Most of these studies have first estimated the impact of extended benefits on the average duration of unemployment and then used that estimate to calculate how much such an increase in the duration of unemployment would raise U , *ceteris paribus*. Bhashkar Mazumder (2011) provided an example of this methodology in a recent article published by the Federal Reserve Bank of Chicago.

Mazumder contrasted the maximum number of weeks of unemployment insurance available during the current recession (99 weeks as of February 2011) with that of the 1982 recession when maximum coverage extended to only 55 weeks. The observed unemployment rate may overstate weakness in the labor market if the unemployed, instead of taking existing job offers, have lengthened the duration of their job search as a consequence of their ability to collect UI benefits for extended periods. Since policymakers rely heavily on unemployment statistics when formulating policy, Mazumder fears that such an increase in the unemployment rate could lead to inappropriate macroeconomic policy decisions (2011, 1).

Mazumder’s method of estimating how much the extension of UI has raised U is based on the steady-state unemployment rate theory that defines the econ-

omy's equilibrium unemployment rate in terms of the rate of job separation (s , the fraction of the employed who are periodically separated from their jobs) and the rate of job finding (f , the fraction of the unemployed who find employment during the same period). In steady-state equilibrium U must equal $s/(s+f)$, and if the recent extension of the maximum duration of UI has lengthened the average duration of unemployment (and thereby reduced f), then extended UI has increased the economy's steady-state unemployment rate. An estimate of the magnitude of the decline in the job finding rate caused by extended UI can be used to estimate the resulting increase in U , *ceteris paribus*.

Mazumder obtained an initial value of f by assuming that the economy was in a steady state during the six months prior to the July 2008 extension of UI. The unemployment rate averaged 5.1% during that period and the average duration of unemployment was 17 weeks. A seventeen-week average duration of unemployment implies a probability of finding a job in any given week of $1/17$ or about 0.06, and since the average month has 4.33 weeks, he estimated the initial steady-state monthly rate of job finding to be 0.253. This combined with $U = 0.051$ implies a job separation rate of 0.0136. These are the base values for f and s he used to estimate how much steady-state U has been increased as a consequence of extended UI (*ibid.*, 2).

The next step in his analysis was to obtain an estimate of how the national average duration of unemployment has been affected by the UI benefit extensions. Mazumder used the finding by Card and Levine (2000) that in a New Jersey extended UI experiment, a one-week increase in the maximum number of weeks of UI benefit eligibility raised the duration of unemployment by 0.1 week. This estimate was applied to the increase in the number of weeks the average eligible unemployed worker could receive UI as of spring 2011, allowing Mazumder to conclude that the average duration of unemployment increased from 17 to almost 20 weeks as a consequence of extended benefits, thus lowering the rate of job finding from 0.253 to 0.22 and raising the steady state unemployment rate by 0.8 percentage points (Mazumder, 2).

As a test of robustness, Mazumder provided alternative estimates by considering other measures of the impact of a week of extended UI eligibility on the duration of unemployment. If an added week of UI benefit eligibility were to increase the duration of unemployment by 0.16 weeks, as estimated by Katz and Meyer (1990), instead of 0.1, then Mazumder's estimate of the resulting increase in U would be 1.2 points rather than 0.8. He also considered alternative values for the UI take-up rate, or the proportion of the eligible unemployed who do receive benefits. During this recent recession, the take-up rate rose from a pre-recession rate of 0.4 to 0.7. If half of this increase in the take-up rate were assumed to be due to the severity of the current recession and the other half due to the extension

of UI, his estimate of the resulting increase in U would change from 0.8 to 1.1 points. (Mazumder, 3) When he combined the Katz and Meyer larger estimate of the impact of an added week of UI on the duration of U with the higher take-up rate, his estimate of the resulting increase in the unemployment rate was 1.7 points (Mazumder, 4). It is worthy to note that Mazumder's estimates are much smaller than that obtained by Barro but are consistent with other recent studies Mazumder reviewed that used both similar and alternative methodologies (ibid., 1-2).

Robert Barro Estimates the Impact

A much more damning estimate of the impact of extended UI on the unemployment rate was provided by Robert Barro (2010) in an op-ed entitled, "The Folly of Subsidizing Unemployment" published in the *Wall Street Journal*. Barro suggested that the June 2010 unemployment rate of 9.5% would have been 2.7 percentage points lower had it not been for the expansion of UI benefit eligibility.

Barro's methodology is straightforward. He begins, like Mazumder, by noting a stark contrast between unemployment durations in the current recession with those of 1982 when the peak mean duration of unemployment was 21.2 weeks and 24.5% of the unemployed were experiencing joblessness for longer than 26 weeks. In contrast, the duration of unemployment in October of 2009 averaged 27.2 weeks, with 36% of the unemployed out of work for more than 26 weeks. Barro notes that since the end of WWII, the duration of unemployment has averaged less than 21 weeks and the long-term jobless made up less than 25% of the unemployed. Why are the numbers for the current recession so much higher than those in the historical record? "[T]he dramatic expansion of unemployment-insurance eligibility to 99 weeks is almost surely the culprit," says Barro.

Barro calculates the possible impact of extended unemployment duration on the unemployment rate by first assuming no change in the size of the labor force. He also assumes that the long-term share of the unemployed would have been 24.5% (its July 1983 level) instead of 46.2% (the June 2010 level) had it not been for the expansion of UI. Given these assumptions, 4.2 million persons who would have otherwise been long-term unemployed would instead have taken a job and the unemployment rate would have been 6.8% instead of 9.5%. Barro goes on to conclude that President Obama should blame his economic advisors for not "arguing that a reckless expansion of unemployment-insurance coverage to 99 weeks was unwise economically and politically."

While Barro admits that his estimate of the impact of extended UI on long-term unemployment and the unemployment rate is "rough," it is worth noting that

his conclusions are based on two critical assumptions. The first involves the impact of UI on the size of the labor force. In his hypothetical absence of the expansion of UI coverage to 99 weeks “the labor force still equaled the observed value (153.7 million).” Under this assumption, U falls with the elimination of extended UI coverage because 4.2 million long-term jobless persons now take jobs they otherwise would have turned down.

Barro does not consider the possibility of an alternative mechanism whereby the elimination of extended UI benefits lowers U because jobless workers who would have otherwise continued their job search (and be counted as unemployed) while collecting extended benefits instead leave the labor force as discouraged workers. In this scenario, reducing UI benefits does lower U officially, but does not in fact increase the absolute number of employed persons.

Barro’s interpretation of the impact of UI is focused exclusively on the first of these two mechanisms, and it is an interpretation that strengthens his position that extending UI benefits was inefficient because it reduces employment by over 4 million persons. If, on the other hand, extended UI raises U because it encourages the jobless to stay in the labor force, then the policy’s economic impact is primarily one of an income transfer to the long-term unemployed that creates no real job losses. Recent analysis of the unemployed in Austria and a review of the existing literature covering other counties (Card et al. 2007) contradict Barro’s interpretation, as, when their unemployment benefits expire, the majority of the unemployed leave the labor force rather than take a job. A recent working paper using data from the Current Population Survey (Rothstein 2011) came to similar conclusions. The impacts of extended UI benefits on unemployment exit, reemployment, labor force exit hazard rates, and on the unemployment rate were estimated. Unemployment insurance extensions were found to have had a larger impact on labor force exit than on reemployment. The December 2010 unemployment rate was estimated to be only 0.3 to 0.6 percentage points higher as a consequence (ibid., 3-4).

In addition to his assumption that extended UI benefits reduce employment rather than change job seekers into discouraged workers, Barro also assumed that the severity of the recent recession could not be responsible for extended durations of unemployment.

The administration has argued that the more generous unemployment-insurance program could not have had much impact on the unemployment rate because the recession is so severe that jobs are unavailable for many people. This perspective is odd on its face because, even at the worst of the downturn, the U.S. labor market featured a tremendous amount of turnover in the form of large numbers of persons

hired and separated every month. [...] A program that reduced incentives for people to search for and accept jobs could surely matter a lot here. (Barro 2010)

This argument—that the severity of the Great Recession cannot explain the current long average duration of unemployment—brings us to the focus of the present investigation. In a severe recession where UI benefits have been extended by unprecedented lengths, how can we determine how much of the observed increase in the unemployment rate is due to the impact of extended UI as opposed to the downturn’s real impact on job separation and potential job offers?

Recent analysis at the National Bureau of Economic Research used Displaced Workers Survey data to conclude that the 2008-09 recession did experience unusually high job separation rates compared to previous recessions, including that of 1982 (Farber 2011). While the NBER research made no attempt to estimate the impact of the increase in job separation on the unemployment rate, it strongly suggests that any attempt to measure the impact of UI changes must take into account the separate impact of the severity of the recession. The next section of the paper attempts to do just that. Two detrending methods are applied to annual real GDP and annual unemployment rate data in an attempt to quantify the separate influences of the severity of the recession and the extension of UI benefits on changes in the unemployment rate. The first detrending method—a variation of Okun’s Law—explains annual changes in the unemployment rate based on deviations in the growth rate of real GDP. The second method uses the Hodrick and Prescott filter to remove the trend from annual real GDP and unemployment rates to identify their business cycle components. The resulting deviation of real GDP from the HP-filter trend is used to explain cyclical deviations in the unemployment rate. Variables measuring the duration of extended UI benefits are then included in both models to measure the impact of extended UI on the unemployment rate after controlling for the severity of the recession.

Theory and Evidence

Okun’s Law is a rule of thumb describing the historically strong statistical relationship between changes in the unemployment rate and the growth rate of real GDP. Arthur Okun (1962) used quarterly data for the 1947-1960 period to estimate the “first differences”² version of the relationship

2. Okun also defined a “gap” version of the relationship between unemployment and real output by expressing changes in the unemployment rate as a function of the gap between potential and actual output.

change in the unemployment rate = a + b*growth rate of real GNP

The focus of Okun's work was to identify a time series for potential GNP (1962, 2), but what came to be known as Okun's Law was his statistical documentation of the unemployment-output growth rate relationship (Knotek 2007). That relationship is used in this section to compare observed changes in the unemployment rate during the recent recession with increases that would be predicted based on the historical relationship between GDP growth and unemployment. Regression analysis is used to estimate the impact that the extension of UI has had on the unemployment rate after controlling for the state of the macroeconomy as measured by the annual growth rate of real GDP.

I used annual observations on the growth rate of real GDP (*grgdp*) (U.S. Bureau of Economic Analysis 2011) and the annual change in the unemployment rate for all civilian workers (Δu) (U.S. Bureau of Labor Statistics 2010) for the 1960-2010 period to obtain an OLS estimate of the "first differences" version of Okun's Law, $\Delta u = \alpha + \beta * grgdp$. The regression results are shown in equation 1 with the T ratios in parentheses. The R-squared for the estimated equation was .749.

$$\text{Equation 1: } \Delta u = 1.313 - 0.392 * grgdp$$

$$(10.4) \quad (-11.98)$$

The intercept term in Equation 1 provides an estimate of how much the unemployment rate would change in a year of no GDP growth, and the slope coefficient estimates the impact of a one percentage point increase in the GDP growth rate on the annual change in the unemployment rate. Both coefficients are highly significant and are consistent with those obtained by Okun's original work with quarterly data and more recent work using annual data (Knotek 2007, 80-81).

The estimated regression equation implies that a year of zero GDP growth would cause the unemployment rate to rise a little over 1.3 points and a one percentage point increase in the output growth rate would be associated with an unemployment rate that would be almost 0.4 points lower than otherwise. These estimates are very close to the 1.2 and -0.35 estimates obtained by Knotek (2007) using annual data from the 1949-2006 period, and both sets of estimates suggest that the growth rate of real GDP that is consistent with a steady unemployment rate is about 3.4 percent.³

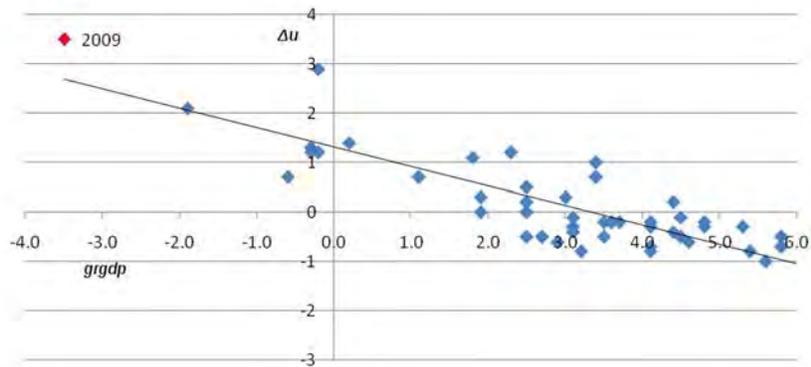
R-squared measures the proportion of the variation in annual changes in U that can be explained by variation in real GDP growth over the last 50 years. Since almost three-quarters of observed changes in U can be explained by fluctuations in

3. Since $\Delta u = \alpha + \beta * grgdp$, the output growth rate that keeps U constant = $-\alpha/\beta$. My estimate of this growth rate is 3.36 percent per year while Knotek's estimate obtained with data from an earlier period was 3.43.

GDP growth rates, it is clear that this strong cyclical variation in the unemployment rate must be taken into account in any attempt to measure how much of the current relatively high unemployment rate is due to the way job seekers have responded to an extension of UI benefits.

These regression results can be used to control for the impact of the business cycle on unemployment in coming to a rough estimate of the potential impact of extended UI, *ceteris paribus*. Figure 1 shows the scatter plot of the 50 annual observations⁴ and the resulting regression line. Any point on the downward-sloping regression line in Figure 1 shows the annual change in the unemployment rate that one would expect to observe given a growth rate in output.

Figure 1. $\Delta u = f(\text{grgdp})$ 1961-2010 annual data



The point labeled 2009 in the upper left corner of the scatter diagram shows the unemployment rate change-GDP growth combination for 2009—the worse year of the recession—when real GDP fell by 3.5 percent. Such a decline in GDP would be expected to raise U by 2.7 points above the prior year's level. However, the actual increase in unemployment from 2008 was 3.5 points. This 0.8 point excess of the observed increase in U over what one would expect given the magnitude of the decline in real GDP could be due to the significant increase in the maximum duration of UI from 13 weeks up to 53 weeks that took place in 2009 (U.S. Department of Labor 2011). This rough estimate of the increase in U that could be due to extended UI is at the bottom of the 0.8 to 1.2 point range found by Mazumder and others but it is less than one-third of the 2.7 point increase suggested by Barro (2010).

4. One year's observation is lost as the unemployment rate variable is the change in U between consecutive years.

An alternative measure of the severity of the 2008-09 recession and its impact on the unemployment rate was obtained by applying the Hodrick-Prescott filter (Hodrick and Prescott 1997) to the GDP (Backus and Kehoe 1992) and unemployment rate data (Mocan 1999) to obtain their HP-filtered trends.⁵ The cyclical components of GDP and U were then calculated by subtracting the annual observed values from trend. The cyclical component of unemployment (*ugap*) was regressed on GDP's deviation from trend (*gdpgap*) expressed as a percentage of its trend value. The regression results are shown in Equation 2 with the T ratios in parentheses. The R-squared for the estimated equation was .61.

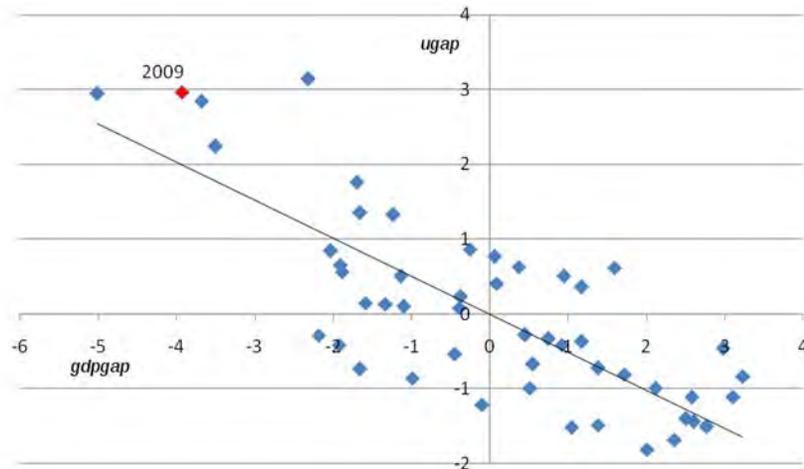
$$\text{Equation 2: } ugap = -0.003 - 0.508 * gdpgap$$

$$(-.03) \quad (-8.84)$$

The slope coefficient on *gdpgap* provides an estimate of how much the unemployment rate deviates from trend for each one percentage point that output deviates from trend. The statistically insignificant intercept term is consistent with the expectation that unemployment will not deviate from its natural level if real GDP does not deviate from trend.

Figure 2 shows the scatter plot for the 1960-2010 annual *ugap* and *gdpgap* observations along with the linear function representing the estimated regression equation. The data point for 2009 is identified, and its deviation from the estimated regression line suggests that the unemployment rate was higher than would be expected given the size of the output gap in that year. Cyclical unemployment is estimated to be 2.0 percentage points when 2009 real GDP is 3.9 points below trend, but the observed gap between the actual unemployment rate and trend was 3 points. This one point excess of the observed *ugap* over what would be expected provides another rough estimate of how much higher unemployment could be a consequence of extended UI. This estimate is also consistent with those found by Mazumder but much less than the 2.7 point increase suggested by Barro.

5. The trends in U and GDP identified by the HP-filter are heavily dependent upon the weight applied to the long-run growth component in the data series. This weight, denoted in the literature as lambda, varies with the frequency of observations. Following Mocan's work on cyclical unemployment and Bacus' work on GDP, lambda was set equal to 1600 for the unemployment series and 100 for the GDP series. The debate over appropriate values for this weight is beyond the scope of this paper. See Ravn and Uhlig (2002) for a discussion of the issues.

Figure 2. $ugap = f(gdpgap)$ 1960-2010 annual data

A critical limitation of these simple regression models is that there are a number of factors—in addition to the extension of UI—not included in the model specified by Equations 1 and 2 that could have an impact on the unemployment rate. Consequently, the models were estimated again this time adding an additional explanatory variable in an attempt to measure more precisely the impact of the extension of UI benefits on the unemployment rate while controlling for GDP.

Data obtained from the U.S. Department of Labor documenting the effective date of special UI benefit extensions and the length of those extensions was used to construct a variable (x_{ui}) measuring the number of additional weeks of unemployment benefits that were available to covered workers during each year over the 1960-2010 period (U.S. Department Of Labor 2011). During some years, extended UI benefits were not available over the entire year, in which case the number of extended weeks of benefits was calculated by multiplying the maximum number of weeks that benefits were payable by the fraction of the year they were available.⁶

The simple inclusion of the annual change in x_{ui} (Δx_{ui}) in Equation 1 or x_{ui} in Equation 2 as additional explanatory variables is likely to produce biased

6. The x_{ui} variable measures the number of weeks of extended unemployment benefits that were available over the year. In years when no extended benefits were available x_{ui} was set to 0. During the two years following the 9-11 attacks, for example, UI was extended by 26 weeks beginning in March of 2002 and those extensions were continued until the end of 2003 at which point in time they were phased out. The 2002 value of x_{ui} was set equal to $10/12 \cdot 26 = 21.67$ since 26 weeks of benefits were only available for 10 months of that year. The 2003 value for x_{ui} was set equal to 26 because 26 weeks of extended benefits were available for that entire year. Each of the other annual values for x_{ui} was established in the same manner.

estimates of the impact of changing durations of UI benefits on the unemployment rate because annual changes in x_{ui} are sure to have both exogenous and endogenous components. OLS regression is expected to provide unbiased estimates of the impact of extended UI on the unemployment rate under the assumption that x_{ui} is exogenous and the direction of causation runs only from changes in weeks of extended UI benefits to changes in the unemployment rate. A correct specification of the model must take into account the endogenous behavior of the duration of unemployment benefits because legislation extending UI benefits is clearly influenced by the state of the economy and the actual unemployment rate, although with a consistent lag (Coven and Stone 2008).

Two versions of each of the models defined by Equations 1 and 2 are specified with the addition of an extended UI independent variable in ways that avoid this likely bias. The first version of this specification—Okun1 and HP1—include Δx_{ui} and x_{ui} as additional independent variables respectively, but also include the lagged value of the dependent unemployment variable as a third independent variable in order to control for the impact of previous labor market conditions that could inflate the estimate of the impact of UI on U. The resulting specifications of the two models, which include both a UI and a lagged dependent variable on the right hand side, are:

$$\begin{aligned} \text{Okun1: } \Delta u &= \alpha + \beta * \text{grgdp} + \gamma * \Delta x_{ui} + \delta * \text{lag } \Delta u \\ \text{HP1: } u_{gap} &= \alpha + \beta * \text{gdpgap} + \gamma * x_{ui} + \delta * \text{lag } u_{gap} \end{aligned}$$

A second version of the two models adds a UI variable that is constructed to remove the endogenous component of variations in UI policy so that the new variable captures only exogenous variation in the extent of UI benefits. This variable was obtained by regressing x_{ui} (weeks of extended UI eligibility) on lagged values of the GDP gap and U gap variables and saving the residuals as a new variable, x_{uisboc} . This new variable should better capture variation in the extent of UI benefits that are due to changes in the national political landscape over time.⁷ This new variable is a ‘generated regressor,’ and Pagan (1984) demonstrated that OLS regression models containing explanatory variables derived from predicted and residual values from prior regressions suffer from a version of the errors-in-variables problem. Consequently, the standard errors and resulting t ratios should be used with caution.⁸

The addition of x_{uisboc} and Δx_{uisboc} —the annual change in x_{uisboc} —results in the following specifications of the two models.

7. As a test of this expectation, x_{uisboc} was regressed on three dummy variables representing Democratic Party control of the Presidency, the House and the Senate. Democratic control over the Senate was found to be positively and significantly related to x_{uisboc} , but the F test did not indicate joint significance.

MULLINS

$$\text{Okun2: } \Delta u = \alpha + \beta * \text{grgdp} + \gamma * \Delta x_{\text{uisbock}}$$

$$\text{HP2: } u_{\text{gap}} = \alpha + \beta * \text{gdpgap} + \gamma * x_{\text{uisbock}}$$

Of particular interest for this research is the sign and significance of γ , the slope coefficient on the variables measuring the weeks of extended UI eligibility. In the two Okun versions of the model, the γ coefficient denotes how much the unemployment rate would change in a given year for every one additional week that UI benefits are extended, ceteris paribus. The γ term in the two HP versions express a similar relationship, only in terms of unemployment's deviation from trend for every week of extended UI. Each of the models was estimated with OLS regression and the results are presented in Table 1 below.

TABLE 1. Summary Regression Results (t stats)

Okun Model Dependent Variable = Change in Unemployment Rate

HP Model Dependent Variable = Unemployment Rate Deviation from HP Trend

Model	GDP	UI	lagU	Adj. R ²	F	D-W
Okun1	-0.334 (-11.60)	0.027 (4.25)	.044 (0.68)	0.84	82.4	NA
Okun2	-0.346 (-10.91)	0.025 (3.44)	NA	0.80	95.4	1.69
HP1	-0.337 (-7.53)	0.029 (3.87)	0.36 (4.94)	0.83	81.8	NA
HP2	-0.477 (-8.48)	0.025 (2.38)	NA	0.66	48.9	0.40
HP2GLS	-0.391 (-10.10)	0.029 (3.95)	NA	0.78	87.0	1.66

The estimated impact of extended UI benefit durations is very consistent in all four models, and slope coefficient estimates on the GDP and UI variables are all of the expected signs and are statistically significant at the $\alpha = .011$ level or better. The estimates of γ obtained from the Okun specification of the model suggest that each one week extension of UI benefits raises the unemployment rate by 0.025 to .027 points, ceteris paribus. The HP specifications are quite consistent as well, with each additional week of extended UI estimated to raise unemployment's deviation from trend by .025 to .029 points.

Since time series regression analysis is typically prone to serial correlation resulting in untrustworthy standard errors and t-ratios, the residuals were examined and the Durbin-Watson test statistic for autocorrelation was calculated for the Okun2 and HP2 models. The Durbin-Watson d is not reported for the Okun1 and HP1 models because it is not a valid test for autocorrelation when the model contains the lagged dependent variable as a regressor (Durbin 1970), so an

8. There are additional technical issues associated with the use of generated regressors that go beyond the scope of this paper. My thanks go to a referee for bringing them to my attention. Interested readers should see Oxley and McAleer (1993) for details.

alternative test was used for those models.⁹ The Okun versions of the model demonstrated no evidence of serial correlation—most likely due to the first-differencing of the data in those models—but this was not the case for the models using the HP filtered data. Durbin’s alternative test confirmed the presence of autocorrelation in the HP1 model and examination of the residuals from the HP2 regression combined with a d statistic much lower than the critical value for d_l confirmed the presence of first-order autocorrelation in that model as well (Gujarati 2006; Studenmund 2006). In order to correct for serial correlation, HP2 was re-estimated using generalized least squares with the following specification.

HP2GLS:

$$ugap_t - \rho^*ugap_{t-1} = \alpha + \beta^*(gdpgap_t - \rho^*gdpgap_{t-1}) + \gamma^*(xuisbock_t - \rho^*xuisbock_{t-1})$$

Rho (ρ) was estimated to be .80 and the resulting GLS regression results are provided in the last row of Table 1.¹⁰ The residuals from this regression showed no sign of first-order autocorrelation, and d increased to 1.66, which exceeds d_u , the upper bound of the indeterminate range for d . The resulting estimates of the impact of the GDP gap and extended weeks of UI on the unemployment rate are still significant and of the expected signs.

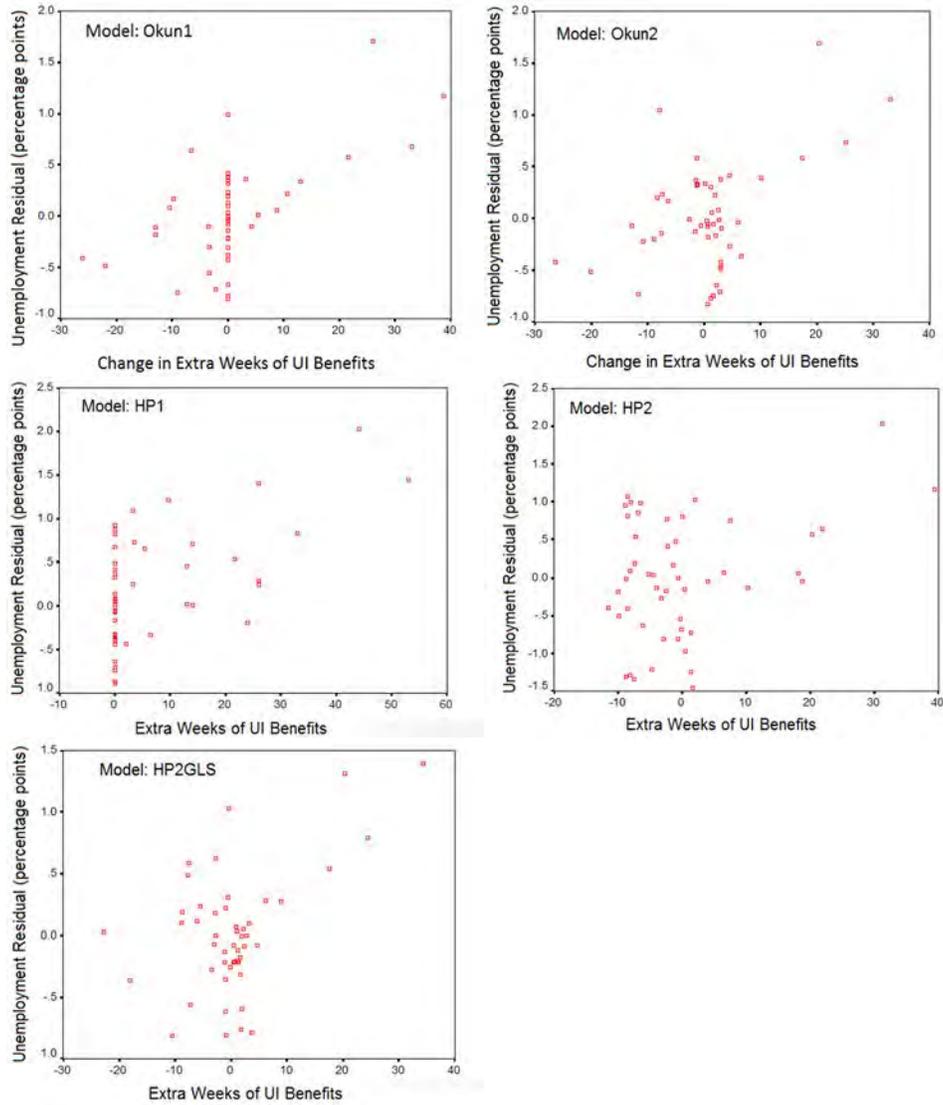
A visual indication of the relationship between extended UI benefits and unemployment is provided by the partial residual plots in Figure 3 (Larsen and McCleary 1972). Each of the five plots—one for every model specification—is formed as $res + \gamma^*ui$ where res are the regression residuals from the model and γ is the regression coefficient on ui , the relevant variable from each model.

These regressions attempt to measure the impact of extended UI on the unemployment rate holding GDP constant. If it were the case that extended benefits reduced GDP while they raised unemployment, my estimate of the impact of UI on unemployment would be biased downward. But a body of research suggests that this scenario is unlikely, as the majority of the unemployed whose UI benefits are exhausted leave the labor force instead of going back to work (Card et al. 2007; Rothstein 2011). Those individuals whose employment is not influenced by extra UI are certainly picked up in my regressions.

9. The residuals from the Okun1 and HP1 OLS regressions were regressed on all regressors in each model plus the lag of the residuals. The t ratio for the coefficient on the lagged residual was then used to test for the presence of serial correlation.

10. An estimate of ρ was obtained by regressing the residuals from the HP2 regression on their lagged values and from the Durbin-Watson test statistic. Both methods resulted in the same value.

Figure 3. Partial residual plots for the UI variable



How Do These Results Compare to Barro's Estimate of the Impact of Extended UI?

The regression results described in the previous section were used to calculate how much higher the unemployment rate was in 2010 as a consequence

of the extension of UI benefits, *ceteris paribus*. Table 2 shows the results of these calculations. The regression coefficient on the UI variable in each of the five specifications of the model was multiplied by the relevant independent UI variable to estimate how much the unemployment rate was increased as a consequence of the increases in the duration of UI benefits that occurred since the Emergency Unemployment Compensation program was created in the summer of 2008. The estimates derived from the two Okun models are percentage point increases in the unemployment rate in 2010, while the HP model estimates are the percentage point increases in the excess of the observed unemployment rate over the trend unemployment rate. These estimates are larger than those provided by Rothstein (2011) but are very close to the 0.8-1.7 point range obtained by Mazumder (2011, 2). They are, however, lower than the 2.7 point estimate provided by Barro (2010).

**TABLE 2. Estimated
Impact on 2010
Unemployment Rate of
Extended UI**

Model	Increase in U
Okun 1	1.43
Okun 2	0.77
HP 1	1.54
HP 2	0.78
HP2GLS	0.90

Summary and Conclusions

The models developed in the previous section estimate that the unemployment rate would have been between 0.77 and 1.54 points lower in 2010 had it not been for the unprecedented increases in the duration of UI benefits that occurred since the Emergency Unemployment Compensation program was created in the summer of 2008. These results are contrasted with those provided by Barro (2010), who assumed that all of the observed increase in long-term unemployment during this recession was due to extended UI, and that if it were not for those extensions the unemployment rate would have been 6.8 percent in the summer of 2010 instead of 9.5. Another estimate (Mazumder 2011) based on steady-state unemployment theory found that the unemployment rate would have been in the 7.8 to 8.7 percent range in the absence of extended UI benefit durations. The present paper controls for the severity of the recession and finds that the 2010

MULLINS

unemployment rate would have been between 8.0 and 8.8 percent if it were not for extended UI benefits.

While my research indicates that Barro's assessment of the impact of UI on unemployment may be exaggerated, one important point to glean from all of these estimates is that policymakers have good reasons to use caution when considering the unemployment rate as a guide to macroeconomic policy, especially during periods when an extension of UI benefits has pushed the unemployment rate above levels that would have prevailed otherwise.

Appendices: Data and Regression Output Files

GDP and U detrended with HP Filter This Excel file contains real GDP and the unemployment rate for the 1960-2010 period. Deviations in real GDP from trend (as a % of trend GDP) and deviations in U from its trend are calculated using the Hodrick-Prescott Filter.

SPSS file with dependent and independent variables for all regressions This file contains all of the dependent and independent variables used in the Okun and HP models as well as the transformed data for the GLS estimate of the HP2 model. The residuals from all models are also saved here and used to create the partial residual plots.

These files contain the SPSS output for each of the five regression models.

[SPSS Output for Okun 1 Model](#)

[SPSS Output for Okun 2 Model](#)

[SPSS Output for HP 1 Model](#)

[SPSS Output for HP 2 Model](#)

[SPSS Output for HP 2 GLS Model](#)

References

Backus, David K. and Patrick J. Kehoe. 1992. International Evidence on the Historical Properties of Business Cycles. *American Economic Review* 82: 864-888.

Barro, Robert. 2010. The Folly of Subsidizing Unemployment. *Wall Street Journal*, August 30. [Link](#)

- Card, David, Rah Chetty, and Andrea Weber.** 2007. The Spike at Benefit Exhaustion: Leaving the Unemployment System or Starting a New Job? *American Economic Review* 97(2): 113-118.
- Card, David, and Phillip B. Levine.** 2000. Extended Benefits and the Duration of UI Spells: Evidence from the New Jersey Extended Benefit Program. *Journal of Public Economics* 78: 107-138.
- Chetty, Rah.** 2008. Moral Hazard versus Liquidity and Optimal Unemployment Insurance. *Journal of Political Economy* 116(2): 173-234.
- Coven, Martha and Chad Stone.** 2008. The Unemployment Rate Is Already High Enough to Warrant Extended Benefits. *CBPP Working Paper*. Center on Budget and Policy Priorities (Washington, D.C.).
- Durbin, James.** 1970. Testing for Serial Correlation in Least Squares Regressions When Some of the Regressors Are Lagged Dependent Variables. *Econometrica* 38(3): 410-421.
- Farber, Henry S.** 2011. Job Loss in the Great Recession: Historical Perspective from the Displaced Workers Survey, 1984-2010. *NBER Working Paper* 17040. National Bureau of Economic Research (Cambridge, Mass.).
- Feldstein, Martin and Daniel Altman.** 1998. Unemployment Insurance Savings Accounts. *NBER Working Paper* 6860. National Bureau of Economic Research (Cambridge, Mass.).
- Gujarati, Damodar N.** 2006. *Essentials of Econometrics*. New York: McGraw-Hill/Irwin.
- Hodrick, Robert and Edward C. Prescott.** 1997. Postwar U.S. Business Cycles: An Empirical Investigation. *Journal of Money, Credit and Banking* 29(1): 1-16.
- Katz, Lawrence F. and Bruce D. Meyer.** 1990. The Impact of the Potential Duration of Unemployment Benefits on the Duration of Unemployment. *Journal of Public Economics* 41(1): 45-72.
- Knotek, Edward S. II.** 2007. How Useful Is Okun's Law? *Federal Reserve Bank of Kansas City Economic Review* (Fourth Quarter): 73-103.
- Larsen, Wayne A. and Susan J. McCleary.** 1972. The Use of Partial Residual Plots in Regression Analysis. *Technometrics* 14(3): 781-790.
- Mazumder, Bhashkar.** 2011. How Did Unemployment Insurance Extensions Affect the Unemployment Rate in 2008-10? *Chicago Fed Letter* (285): 1-4.
- Mocan, H. Naci.** 1999. Structural Unemployment, Cyclical Unemployment, and Income Inequality. *Review of Economics and Statistics* 81(1): 122-134.
- Okun, Arthur M.** 1975. *Equality and Efficiency, The Big Tradeoff*. Washington D.C.: Brookings Institute.
- Okun, Arthur M.** 1962. Potential GNP: Its Measurement and Significance. *Cowles Foundation Paper* 190. Reprinted from *Proceedings of the Business and Economics*

MULLINS

Statistics Section of the American Statistical Association. Cowles Foundation, Yale University (New Haven, Conn.).

Oxley, Les and Michael McAleer. 1993. Econometric Issues in Macroeconomic Models with Generated Regressors. *Journal of Economic Surveys* 7(1): 1-40.

Pagan, Adrian R. 1984. Econometric Issues in the Analysis of Regressions with Generated Regressors. *International Economic Review* 25(1): 221-247.

Ravn, Morten O. and Harald Uhlig. 2002. On Adjusting the Hodrick-Prescott Filter for the Frequency of Observations. *Review of Economics and Statistics* 84(2): 371-376.

Rothstein, Jesse. 2011. Unemployment Insurance and Job Search in the Great Recession. Working paper. [Link](#)

Studenmund, A. H. 2006. *Using Econometrics*. Boston: Pearson/Addison Wesley.

U.S. Bureau of Economic Analysis. 2011. *National Economic Accounts*. [Link](#)

U.S. Bureau of Labor Statistics. 2011. *Labor Force Statistics from the Current Population Survey*. [Link](#)

U.S. Department of Labor. 2011. *All Special Extended Benefits Programs*. [Link](#)

About the Author



Steven Mullins received his Ph.D. in economics from Oklahoma State University in 1983. He is currently Professor of Economics in the Breech School of Business Administration at Drury University in Springfield, Missouri, where he teaches a variety of economics courses including macroeconomics and econometrics. His research interests include macroeconomic influences on U.S. poverty and the impact of tax reform on the distribution of after-tax income. His firm, Mullins

Econometrics, provides consulting services in a wide variety of legal cases such as workplace injury, wrongful termination, and patent disputes. As an aviation enthusiast he builds and flies experimental aircraft in his spare time. You can contact him at smullins@drury.edu.

[Go to Archive of Comments section](#)
[Go to January 2012 issue](#)



Discuss this article at Journaltalk:
<http://journaltalk.net/articles/5750>



EJW-MERCATUS SYMPOSIUM
U.S. SOVEREIGN DEBT CRISIS:
TIPPING-POINT SCENARIOS AND CRASH DYNAMICS

Introduction to Symposium on U.S. Sovereign Debt Crisis: Tipping-Point Scenarios and Crash Dynamics

Tyler Cowen¹

[LINK TO ABSTRACT](#)

We now live in an age of financial crises. My reading is that, unbeknownst at the time, the 1990s were a kind of warm-up act, featuring the Mexico financial crisis, the Asian financial crisis, and the troubles at Long-Term Capital Management. The years 2007-2009 brought a full-scale financial crisis to the United States, only a year or two after talk of “The Great Moderation” had become the conventional macroeconomic wisdom. Suddenly the United States was on the verge of a financial meltdown.

In 2011 the major crisis was in the Eurozone, where Greece, Italy, Spain, Portugal, and Ireland deal with the risk of default. The survival of the Eurozone is now seriously doubted. It is also commonly believed that the troubles of the periphery nations might lead to contagion effects that would severely damage France, Belgium, Finland, and other nations. Our times are now truly scary.

2011 was also notable for the near-default of the United States, based on a budget gridlock in a dysfunctional Congress, and for America’s loss of its traditional AAA credit rating. We are no longer as invulnerable as we once seemed.

When it comes to a sovereign debt crisis, it is no longer possible to say “it can’t happen here.” Right now we are borrowing about forty cents of every

1. George Mason University, Fairfax, VA 22030.

dollar the federal government spends, and the imbalance has no end in sight. The American electorate has dug in against both major tax increases and major spending cuts. Super-low borrowing rates have made it all the more tempting to maintain and indeed extend budget deficits. Keynesian economics promises that more government spending will stimulate the economy and create jobs.

More and more economists and budget commentators believe we are in for a rude awakening, and I don't mean thirty or forty years down the road. I mean within the next ten to twenty years or maybe sooner. Yes, U.S. bond rates are remarkably low, but they were low for a lot of the Eurozone just a few years ago. It is possible that the low rates reflect the precariousness of the situation, and the lack of alternative outlets for invested funds, rather than any rosy picture of America's fiscal future. Today, an attitude of fiscal complacency would be very risky, especially since the United States government has not settled on any credible plan to stop running budget deficits, even in the longer term.

And that is why EJV and the Mercatus Center at George Mason University have undertaken this symposium: To produce and disseminate a better understanding of what a sovereign debt crisis in the United States would look like and what might bring it about.

The sorry truth is that recent crises were developments for which the world was quite unprepared. To a large extent we have suffered from a failure of imagination. Academics have been remiss in formulating and thinking through a suitable range of possibilities.

So we bring you these essays, in the hope that it's not too late for them to make a difference. The authors were invited to speculate on possible tipping points and associated triggers, and on crash dynamics—what happens in the crisis. The authors were encouraged to imagine possible futures, not merely as financial analysts but as political economists. We are grateful to the contributors, Jeffrey Rogers Hummel, Garrett Jones, Arnold Kling, Joseph Minarik, and Peter Wallison, for their fine work. We believe the essays can help everyone going forward.

About the Author



Tyler Cowen is the Holbert C. Harris Professor of Economics at George Mason University and General Director of the Mercatus Center. His latest book is *The Great Stagnation: How America Ate All the Low-Hanging Fruit of Modern History, Got Sick, and Will (Eventually) Feel Better*.

[Go to archive of Watchpad section](#)

[Go to January 2012 issue](#)

[Go to Mercatus Center symposium presentation page](#)



Discuss this article at Journaltalk:
<http://journaltalk.net/articles/5751>



EJW-MERCATUS SYMPOSIUM
U.S. SOVEREIGN DEBT CRISIS:
TIPPING-POINT SCENARIOS AND CRASH DYNAMICS

Some Possible Consequences of a U.S. Government Default

Jeffrey Rogers Hummel¹

[LINK TO ABSTRACT](#)

Few now doubt that the U.S. government is rushing headlong toward a major fiscal crisis. Promised future outlays, mainly for Social Security, Medicare, and Medicaid, far exceed projected future revenue. The size of the fiscal gap is very sensitive to both demographic changes and economic fluctuations.

The latest estimate of Laurence J. Kotlikoff (2011) puts the gap's present value at the bone-crushing level of \$211 trillion. A more modest estimate from Jagadeesh Gokhale and Kent A. Smetters (2006, 203) estimates the gap as of 2010 at \$79.4 trillion. The Congressional Budget Office's (CBO's) most recent long-term outlook (2011, 80) has federal expenditures in its Alternative Fiscal Scenario—*not counting interest on the accumulating national debt*—rising by 2085 to nearly 35 percent of GDP whereas revenues will still be below 20 percent of GDP, a shortfall of almost 15 percent. Marc Joffe (2011), a former employee of Moody's Analytics, projects that by 2040 the national debt will have already reached more than 180 percent of GDP and that interest alone will swallow nearly 40 percent of federal revenue.

These projections admittedly assume no drastic entitlement or tax changes in the future. I have argued elsewhere (Hummel 2007, 2009, 2010; Henderson and Hummel forthcoming) that (a) federal tax revenue will never consistently rise much

1. San Jose State University, San Jose, CA 95152. I would like to acknowledge the vital assistance of Warren Gibson, David R. Henderson, Marc Joffe, and Justin Rietz, none of whom necessarily shares my conclusions.

above 20 percent of GDP (and certainly not above the 25 percent that federal taxes never quite reached during World War II), (b) politicians have little incentive to come up with the requisite expenditure cuts in time, and (c) monetary expansion and its accompanying inflation will no more be able to close the fiscal gap than would an excise tax on chewing gum. Here I explore the consequences, given those three likely constraints, of the only possible alternative: a very substantial default by the U.S. government on Treasury securities. Once a tipping point is reached, such a default will probably unwind swiftly, leaving American politicians with no other options. Whether the default will result in a restructuring that only reduces the U.S. government's debt burden or in something approaching a more complete repudiation is impossible to foretell. Either way, the short-run consequences for the economy will be painful. But the long-run consequences, both economic and political, could be beneficial, and the more complete the repudiation, the greater the benefits.

The Cascade into Default

The financial structure of the U.S. government has two nominal firewalls. The first, between Treasury debt and unfunded liabilities, is provided by the trust funds of Social Security, Medicare, and other, smaller federal insurance programs. These permit the illusion that the shaky fiscal status of social insurance has no direct effect on the government's formal debt. But according to the latest *intermediate* projections of the Trustees, the Hospital Insurance (HI-Medicare Part A) trust fund will be out of money in 2024, and the Social Security (OASDI) trust funds will run out in 2036. The *pessimistic* projections have Hospital Insurance empty by 2017 and Social Security by 2030.²

Whenever the trust funds are exhausted, payroll taxes will be insufficient and general revenues will have to finance these programs. Although other parts of Medicare and all of Medicaid already dip into general revenues, when HI and OASDI need to do so, the first firewall will vanish. Anticipation of this event is a potential tipping point, stripping away any illusion that the Treasury's ability to service its more formal debt is somehow independent of the unfunded liabilities of Social Security and Medicare. If investors react by requiring a risk premium on Treasury securities, the cost of rolling over the national debt will immediately rise. As of September 2011, 15 percent of the Treasuries held by the general public

2. Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds (2011, 38, 71) and Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds (2011, 3, 57).

(including the Fed), or nearly \$1.5 trillion, were Treasury bills, which mature in less than one year (Bureau of the Public Debt 2011). A self-reinforcing cycle, in which the rising risk premium exacerbates the federal government's financial straits, would further raise the premium. Events would then move very fast, much like the collapse of the Soviet Union in 1990-1991.

The second financial firewall is between U.S. currency and government debt. The Federal Reserve *could* unleash the Zimbabwe option. My expectation is that, faced with the alternatives of seeing both the dollar and the debt become nearly worthless or defaulting on the debt while saving the dollar, the U.S. government will choose the latter. Russia in 1998 is just one recent example of a government choosing partial debt repudiation over a collapse of its fiat currency (Chiodo and Owyang 2002).

Other events of course might serve as tipping points. In their extensive studies of past financial crises, Carmen M. Reinhart and Kenneth S. Rogoff (2009, 2010) have suggested that a government debt equal to 100 percent of GDP has passed a dangerous threshold. Both the CBO, in its Alternative Fiscal Scenario, and Marc Joffe project that the U.S. will breach this threshold soon after 2020. Paul Krugman (2010a, 2010b) disputes the significance of the 100-percent threshold. The U.S. national debt reached over 100 percent of GDP during the Second World War, and the United Kingdom was able to successfully manage and reduce a World War II-government debt that had climbed all the way to 250 percent of GDP.

Perhaps a more meaningful indicator is interest on government debt as percent of total revenue. This ratio varies not only with the debt's size but with changes in government revenue and interest rates. Doug Elmendorf (2009, slide 11), director of the CBO, provides some sobering calculations. The report's Alternative Fiscal Scenario estimated that if federal revenues remained in the neighborhood of 20 percent of GDP for the next 75 years, while federal expenditures net of interest rose to 35 percent of GDP (roughly similar to the 2011 CBO estimate), adding interest payments from the accumulating national debt would drive total federal expenditures up to 75 percent of GDP by 2083, and that would entail interest amounting to a fantastic 40 percent of GDP. Obviously government finances will have reached an explosive tipping point long before that level is ever reached.

Short-Run Consequences of Default

As of September 30, 2011, the total outstanding Treasury debt was \$14,790,340 million, or 97 percent of Gross Domestic Product (Bureau of the Public Debt 2011). But \$4,663,309 million were held by government agencies,

HUMMEL

mainly the Social Security and Medicare trust funds. So the conventionally cited figure is the \$10,127,031 million held by the public (including the Federal Reserve System), 67 percent of GDP (see Table 1 for comparable numbers as of second quarter of 2011). Even economists debate which is the more relevant number. Yet if one is concerned about the looming fiscal gap, then one needs to add not just the trust funds but the remainder of the fiscal shortfall, yielding as mentioned above a total variously estimated between \$79 trillion and \$211 trillion. For analyzing the short and long-run consequences of a Treasury default, how to count the trust funds diminishes in importance. By the time a fiscal crisis occurs, the trust funds will already have been depleted, whereas the amount held by the public will have increased. We can therefore concentrate on who among the “public” holds the debt, under the probable assumption that the relative proportions will not alter too much as the debt grows (see Tables 2 and 3).

The Federal Reserve, which is anomalously considered part of the public in official reports, holds about \$1.6 trillion in Treasury securities as of September 2011, or almost 17 percent of the publicly held debt (Financial Management Service 2011). That percentage is not much higher than it was before the enormous increase in the Fed’s balance sheet brought on by the recent financial crisis. It could grow substantially if the Fed monetizes more Treasury debt, unless the Fed sterilizes its purchases by selling off its nearly \$1 trillion worth of mortgage-backed securities and assorted miscellaneous assets. But to the extent that the Fed is now paying interest on bank reserves (and at a rate that exceeds the return on short-term Treasuries), this portion partly represents indirect holdings of private commercial banks and other depositories.

About 45 percent of the publicly held U.S. Treasuries is owned abroad, more than three-quarters of that by foreign governments and their central banks (Bertaut and Tryon 2007; Hamilton and Wu forthcoming; Reitz 2011). China is the largest foreign investor in U.S. Treasuries, with its holdings (both government and any nominally private) combining to \$1.137 trillion as of August 2011, or about a quarter of foreign holdings (Department of the Treasury/Federal Reserve Board 2011).

The remaining 40 percent of the publicly held debt is owned domestically. The proportions shown in Table 2 offer some idea of how losses from the national debt’s total repudiation, to take the extreme case, would be distributed. Although the Fed would technically become bankrupt, that would represent merely an accounting fiction. Most of the interest that the Fed earns on its securities is now simply rebated to the Treasury, which consequently would directly lose an insignificant annual flow of revenue from repudiation. The Fed’s ability to issue fiat base money would not be compromised, so long as Federal Reserve notes remain payable for taxes, and such issues could easily cover the Fed’s operating

expenses (including any interest on reserves), as well as finance other government expenditures. More disturbing is the prospect that the Fed might then put new money into circulation by purchasing other private securities, making it an even bigger player in private financial activities and the allocation of savings than it has already become as a result of the financial crisis.

If a total repudiation took place today, initial direct losses to the U.S. private sector would total about \$4 trillion, significantly less than any estimate of the U.S. government's enormous fiscal gap, even less than the \$10 trillion fall in the value of the U.S. stock market between 2007 and 2008, and about equal to the fall in the value of U.S. real estate between 2007 and 2009 (Federal Reserve Board of Governors 2011, 94, 106). Outside of the household sector, with its unknown amount of hedge and trust fund holdings, the largest total dollar losses would fall on mutual funds, state and local governments and their retirement funds, and private pension plans. Looking at the overall portfolios within these sectors, the heaviest hit would be money market funds, whose holdings of Treasuries constitute 13 percent of their total assets. Other mutual and closed-end funds hold only a little more than 3 percent of their portfolios in Treasuries. But for private pension funds, the proportion is 8 percent, and for state and local government retirement funds, 6 percent. Commercial banks are still the economy's most important financial intermediaries, holding \$10 trillion in total assets. Treasury securities are only 1.7 percent of that total (although government agency and GSE-guaranteed securities constitute a whopping 13.0 percent).

Admittedly such a crude reckoning ignores an array of secondary effects. Treasuries serve as collateral for other loans in a complex and interconnected financial structure in which savings often passes through two, three, or more layers of intermediation. Default will reverberate throughout credit markets, imposing losses on financial institutions with little direct exposure to government debt. The short-run economic consequences could be very severe and possibly trigger unfortunate political interventions. It is easy to conjure up apocalyptic scenarios of the sort that stampeded Congress into adopting the infamous TARP and that are now terrifying European governments. But the realism of such scenarios is open to question.

Nor are dollar losses strictly analogous to the government's fiscal gap, given that the gap estimates government transfers that may or may not occur in the future. Any full accounting of how such an event would affect the U.S. economy has first to consider that, prior to the crisis' final culmination, individuals and institutions will almost certainly start to dump Treasuries, fleeing to other assets. How the crisis ultimately plays out depends crucially on what they flee to. Still more important is that canceling of government debt is itself a transfer, with its own

offsetting liability that will likewise decline. And that brings us to the potentially desirable long-run consequences.

Long-Run Consequences of Default

The most important long-run *political* benefit of a Treasury default would be that it would make it more difficult for the U.S. government to borrow money. In other words, a default is a balanced-budget amendment with teeth, as David D. Friedman once put it. Sadly, that characterization is not strictly correct. Many defaulting governments have proved able to go back into the loan markets soon thereafter, although often at higher interest rates. Still, a default would help to encourage both greater fiscal responsibility and lower total expenditures on the part of the U.S. government.

A Treasury default would also bring long-run *economic* benefits. Loan transactions have two parties, the lender (or creditor) who forgoes the current use of money in exchange for a financial asset, and the borrower (or debtor) who gains the current use of money in exchange for a financial liability. All debt, whether private or public, therefore has both an asset side and a liability side. A sudden and unanticipated repudiation of a private debt, so long as no one expects it to be repeated or extended to other debts in the future, has only a distribution effect: The debtor gains by the exact same amount that the creditor loses, with no net wealth effect.

So where is the offsetting liability created by government debt? Although superficially it appears that government itself bears the liability, this impression misses the underlying economic reality. The liability ultimately rests on taxpayers, because their taxes will be almost the entire source of revenue to pay interest and, less frequently, the principal on the government debt. For nearly every financial asset created by government borrowing, therefore, a corresponding tax liability exists. Even if the debt is perpetually funded and never repaid, the discounted present value of this stream of future taxes roughly equals the total value of the debt.

In short, the inevitable default on Treasury securities will reduce taxes required in the future, and the more complete the repudiation, the greater the tax relief. How this affects the value of taxable assets, including human capital, depends on how perfectly people anticipate future tax liabilities. The degree to which they do so is a technical issue much debated by macroeconomists. The claim that people completely and correctly anticipate these future levies is known as Ricardian Equivalence. If Ricardian Equivalence holds even approximately, then the decline in the value of Treasuries should be mostly offset by an eventual rise in

the total value of both privately issued assets, such as shares of stock and corporate bonds, and expected future wage income.

If Ricardian Equivalence does not hold, and people do not perfectly anticipate their future tax liabilities, then they erroneously believe that Treasury securities represent net wealth. Suffering from what is sometimes called “bond illusion” or “fiscal illusion,” they think they are wealthier than they actually are. Whether this illusion has desirable or undesirable economic consequences is one of the many questions involved in economic controversies over business cycles, fiscal policy, and economic growth. Regardless of the answers to these questions, repudiation of the national debt will bring people’s perception of their net wealth into better alignment with reality. They will still enjoy a reduction in future taxes despite never having realized that they would have had to pay them.

Repudiation of Treasury securities held abroad will entail a long-run net gain for Americans. Constituting a transfer to a wealthy U.S. from the rest of the world, this distribution effect may appear unfair. But it has the advantage of ending the coerced support paid to foreign governments, particularly China, by U.S. taxpayers. Indeed, we should keep in mind that the frequent and much-touted bailouts of governments to help them avoid or palliate sovereign defaults, such as of Mexico in 1994, usually end up benefiting creditors, who have willingly taken on the risk of loaning money to governments, at the expense of taxpayers in the “bailed out” country. Such will probably be the consequence of the ongoing fiscal crisis in Greece; and it repeats a pattern that dates back at least as far as the notorious U.S. military interventions into Latin America early in the twentieth century (Langley 1989).

Repudiation of the domestically held national debt would bring no change in net wealth, should Americans perfectly anticipate their future tax liabilities. Moreover, the existence of offsetting tax liabilities serves to mitigate the domestic distribution effects of repudiation. Since nearly everyone pays taxes or owns assets whose value is reduced by taxation, even many who hold government debt will gain overall. They will find over the long run that, as their government securities are wiped out, their other assets rise in value. Even if people do not perfectly anticipate future tax liabilities, they clearly anticipate a part of them, so there should be some compensating rise in the value of private assets.

No matter how incompletely gains show up in private assets, people will *in fact* tend to gain or lose on the basis of whether, over the range of their economic activities, they are net tax consumers or net taxpayers. Of course, the correspondence between net tax consumers and the losers from repudiation on the one hand and net taxpayers and the gainers from repudiation on the other will not be exact. Government debt is not the only means by which the state dispenses tax-generated largess. The correspondence, however, will be close enough to ensure

that a non-trivial number of the government's creditors will be helped more than they are harmed in the long run.

Those anticipating benefits from Social Security, Medicare, and Medicaid will be harmed most, because a Treasury default would almost certainly involve a concomitant collapse of those programs. Reliance upon these government promises constitutes a particularly egregious form of fiscal illusion. Here we have to be careful about estimates of the fiscal shortfall. Not all of it, particularly the part resulting from Medicaid, involves taxes earmarked for implicit promises to particular individuals. Moreover, Social Security and Medicare both create two different types of gaps: (a) the "open-group" obligation (or actuarial deficit), based on all future participants in the program, and (b) the "closed-group" obligation (or unfunded liability), based on only participants who currently have paid something in. The latter, which represents the present value of honoring all existing promises while otherwise shutting down the program, is usually larger.

The "closed-group" obligation is also a better proxy for losses inflicted by elimination of these benefits. The Social Security Trustees have kept their estimates of the liability fairly constant in their last four annual reports.³ The Medicare Trustees, in contrast, drastically reduced their estimates after passage of Obama's Patient Protection and Affordable Care Act of March 2010.⁴ Even the CBO's Alternative Fiscal Scenario evinces skepticism about the act's claimed ability to reduce expenditures (CBO 2011). Yet the Treasury's *Financial Report of the United States Government* reduced the 75-year closed-group shortfall for both Social Security and Medicare (Parts A, B, and D) from \$52 trillion in 2009 to \$43 trillion in 2010 (Financial Management Service 2010, 21). Whatever the correct number, the best way to alleviate future suffering is to repeatedly and emphatically warn the American people that these programs will go under. The more accurately people anticipate this inevitable outcome, the better prepared they will be.

As the inevitability of a U.S. default becomes increasingly apparent, more and more people will try to unload their government securities before others catch on. So some offsetting rise in the value of other assets should commence before default occurs. Exactly where individuals and institutions try to invest instead will affect both the short run and the long run. One possibility is assets dominated in foreign currencies, contributing to some depreciation of the dollar. But the three primary alternatives for most Americans will be a shift into (a) real assets, including commodities such as gold, as well as real estate, consumer durables, and physical

3. Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds (2011).

4. Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds (2009, 2011).

capital goods; (b) dollar-denominated financial instruments *other than* Treasuries and those that represent claims to Treasuries; or (c) dollars themselves, meaning Federal Reserve base money. If the shift is primarily into (a), it could further fuel inflation, but if the Fed successfully decouples its fiat money from Treasuries, as I expect, then we could instead see a major shift into (c), which if severe enough, could be deflationary.

Deflation raises the specter of default triggering a financial crisis similar to that beginning in 2007. But the duration and severity of any resulting depression would depend on what other government policies are imposed in response. Perhaps the most chilling prospect: the U.S. government repudiates its debt and simultaneously raises taxes, thus confiscating taxpayer gains. Yet how would politicians get away with doing so when they are unable to raise taxes high enough to prevent default in the first place? We can only speculate about what interventions might follow a Treasury default. Nonetheless, the national debt, by its nature, obligates the government to make future payments. That obligation can ultimately be honored only through taxation or monetary expansion. Repudiation, by eliminating that obligation, may be the most desirable among feasible alternatives.

Historical Case Study

Historical case studies can be a rich source of anecdotal evidence. I will explore only one striking case, from the early history of the United States. It dramatically contradicts the common presupposition that sovereign defaults are necessarily dire. Indeed, it substantiates my argument that default can usher in such desirable results as decreasing government intervention and expanding prosperity. The case involves the default of state governments in the 1840s.

After the War of 1812, New York State began construction of a canal connecting the Hudson River with the Great Lakes. The Erie Canal, completed in 1825, was one of those rare instances where a socialist enterprise actually made a good profit; it encouraged other states to emulate New York. An orgy of canal building resulted. Usually, state governments owned and operated these new canals. In those few instances where the canals were privately owned, the states contributed the largest share of the financing. By 1840, the canal boom had blessed the United States with 3,326 miles of canals at an expense of \$125 million, a large sum in those days. Virtually all the new canals were a waste of resources and did not deliver the hoped-for monetary returns. Instead the heavy state investments, when added to budget growth stimulated by the War of 1812, led to massive borrowing (Ransom 1964; Taylor 1951).

Then in May of 1837 a major financial panic engulfed the country's 800 banks, forcing all but six to cease redeeming their banknotes and deposits for gold or silver coins. The panic brought on a sharp depression that was quickly over (McGrane 1924; Rezneck 1935). Amazingly, after recovery, the outstanding indebtedness of states nearly doubled, with a third of that invested in state-chartered banks in the Midwest and South (Wallis, Sylla, and Grinath 2004). By the end of 1839, a second bank suspension spread to half the country's banks. Over the next four years nearly a quarter of state banks failed, the country's money stock (M2) declined by one-third, and prices plummeted 42 percent (Hummel 1999; Temin 1969). The state governments faced financial stringency, and during the deflation of 1839-1943 many became desperate. By 1844, \$60 million worth of state improvement bonds were in default. Four states—Louisiana, Arkansas, Michigan, and Mississippi—as well as the territory of Florida repudiated debts outright, while four others—Maryland, Illinois, Pennsylvania, and Indiana—defaulted temporarily. New York and Ohio escaped similar straits only by taking extraordinary measures (Ratchford 1941; Wallis 2002).

Rather than having disastrous long-run effects, this combination of default and repudiation generated a widening circle of benefits. To begin with, it prompted state governments to make major fiscal reforms. As John Joseph Wallis (2001, 1) reports: "Beginning with New York in 1846, almost two-thirds of the states wrote new constitutions in the next ten years. The constitutions restricted state investment in private corporations; limited or banned incorporation by special legislative act; created general incorporation laws for all types of business; altered the way state and local governments issued debt; put absolute limits on the amount of debt governments could issue; and fundamentally changed the structure of the property tax." As Thomas J. Sargent asks in his Nobel Prize lecture (2011), how likely would have been such reforms if the state governments had been bailed out by the national government, as many in Congress wished to do at the time?

States became wary of investing in internal improvements or anything else. This ensured that the states left development of the railroad network primarily to the market. Nearly all the previously state-owned lines were unloaded. Although the state and especially the local governments continued to subsidize railroads through some direct investment and in less conspicuous ways, private sources ended up providing three-quarters of all the capital for American railways prior to 1860 (Fishlow 1972, 496). Indeed, the period after the fiscal crisis was when the states finally threw off their mercantilist heritage and, for the first time, moved toward *laissez faire*.

Foreigners—particularly the British, who had invested about \$100 million in state bonds—now became extremely cautious about loaning money to state governments. Investor caution even extended to the national government. When

American agents investigated the possibility of borrowing money in Europe in 1842, they were told that U.S. bonds could not be marketed there because of a feared federal government default (English 1966; McGrane 1935). Moreover, the state constitutional restrictions on borrowing bequeathed a salutary fiscal legacy that, despite subsequent undermining, has lingered to the present day (Kiewiet and Szakaly 1996; Wallis 2005).

Nor did the economic distress of the deflation of 1839-1843 extend far beyond the state governments and state-chartered banks. Many economists have been struck by the comparison between this episode and the Great Depression of 1929-1933. Qualifying as the two most massive monetary contractions in American history, they were of identical magnitude and duration. But there the similarities end. During the Great Depression, as unemployment peaked at nearly 25 percent in 1933, U.S. production of goods and services collapsed by 30 percent. During 1839-1843, investment fell but the economy's total output did not; it actually rose somewhere between 6 and 16 percent, and real consumption rose even more. This nineteenth-century episode was nearly a full-employment deflation. And once it was over, the country continued to enjoy the sustained economic growth that had begun in the 1830s, with its rising real incomes and increasing prosperity (Temin 1969, 157; Friedman and Schwartz 1963, 299; Carter et al 2006, Table Ca219).

Conclusion

Within the next two decades, the U.S. government will likely default on its explicit and implicit promises. Although how and when are uncertain, the fundamental and massive budgetary changes required to prevent a fiscal crisis are politically unimaginable. Whether the fiscal gap is \$211 trillion or \$79 trillion, it can only be closed with some combination of benefit cuts and revenue increases whose total present value equals the shortfall. If politicians today abolished Medicare and Medicaid, then some judicious combination applied to the remaining gap could save Social Security on a pay-as-you-go basis. Or opening the borders to unrestricted immigration might funnel enough new taxpayers into the front end of the entitlement programs to make the required reforms less drastic. Otherwise, only default can impose the necessary fiscal discipline. The state government experience of the 1840s suggests that this may provide the most durable long-run solution.

Tables

TABLE 1. How Big Is the National Debt? (2011-Q2; in billions)

Gross Treasury debt*	\$14,270
Held by government agencies	-4,614
Outstanding debt	\$9,656
Held by Federal Reserve	-1,345
Held by private investors (including commercial banks)	\$8,311
Held abroad	-4,479
Held domestically	\$3,832
(U.S. GDP as of 2011-Q2: \$15,023 billion.)	
*Omits \$24 billion of debt issued by government-owned agencies and \$645 billion of liabilities issued by government-sponsored enterprises.	
<i>Source:</i> Financial Management Service (2011).	

TABLE 2. Holdings by Sector of the Outstanding National Debt (2011-Q2; percentages of \$9,714 billion total)

Households and nonprofit organizations	8.60%
Nonfarm nonfinancial corporate business	0.47%
Nonfarm nonfinancial noncorporate business	0.46%
State and local governments	4.99%
Rest of the world	45.68%
Federal Reserve	16.67%
Commercial banks and other depositories	2.93%
Insurance companies	2.58%
Private pension funds	5.35%
State and local government employee retirement funds	1.91%
Federal government retirement funds*	1.40%
Money market mutual funds	3.52%
Mutual funds	3.16%
Closed-end and exchange-traded funds	0.63%
Government-sponsored enterprises	0.65%
Issuers of asset-backed securities	0.34%
Security brokers and dealers	0.64%
* Federal Employees Retirement System Thrift Savings Plan "G Fund."	
<i>Source:</i> Table L.209 in Board of Governors of the Federal Reserve System (2011).	

POSSIBLE CONSEQUENCES OF A DEFAULT

TABLE 3. Foreign Holdings of Treasury Securities (August 2011; in billions)

China, mainland	\$1137.0
Japan	936.6
United Kingdom	397.2
Oil exporters	236.3
Brazil	210.0
Caribbean banking centers	161.2
Taiwan	150.3
Switzerland	147.5
Hong Kong	107.9
Russia	97.1
Canada	82.6
Luxembourg	62.0
Germany	60.2
Singapore	58.3
Thailand	54.5
Turkey	39.2
India	37.7
Ireland	33.6
South Korea	32.4
Belgium	31.8
France	29.0
Poland	28.7
Mexico	28.0
Philippines	25.1
Italy	23.7
Netherlands	22.6
Norway	22.0
Sweden	21.3
Colombia	21.0
Chile	19.4
Israel	18.3
Malaysia	13.4
Australia	11.6
All other	214.9
Grand total	\$4572.5
Foreign governments	\$3261.8
Of which Treasury bills	387.3
(Oil exporters include Ecuador, Venezuela, Indonesia, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates, Algeria, Gabon, Libya, and Nigeria. Caribbean banking centers include Bahamas, Bermuda, Cayman Islands, Netherlands Antilles, and Panama.)	
<i>Source:</i> Department of the Treasury/Federal Reserve Board (2011).	

References

- Bertaut, Carol C. and Ralph W. Tryon.** 2007. Monthly Estimates of U.S. Cross-Border Securities Positions. *International Finance Discussion Papers* 910. Board of Governors of the Federal Reserve System (Washington, D.C.). [Link](#)
- Board of Governors of the Federal Reserve System.** 2011. *Flow of Funds Accounts of the United States: Flows and Outstandings, Second Quarter 2011*. Washington, D.C.: Board of Governors of the Federal Reserve System. [Link](#)
- Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds.** 2011. *Annual Report*. May 13. Washington, D.C.: U.S. Government Printing Office. [Link](#)
- Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds.** 2009. *Annual Report*. May 12. Washington, D.C.: U.S. Government Printing Office. [Link](#)
- Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds.** 2011. *Annual Report*. May 13. Washington, D.C.: U.S. Government Printing Office. [Link](#)
- Boards of Trustees, Social Security and Medicare.** 2011. *Status of the Social Security and Medicare Programs: A Summary of the 2011 Annual Reports*, by Timothy Geithner, et al. Baltimore: Social Security Administration. [Link](#)
- Bureau of the Public Debt, Department of the Treasury.** 2011. *Monthly Statement of the Public Debt of the United States*. September 30. Parkersburg, W.Va.: Bureau of the Public Debt. [Link](#)
- Carter, Susan B., et al,** eds. 2006. *Historical Statistics of the United States: Earliest Times to the Present*. Millennial Edition. 5 vols. New York: Cambridge University Press.
- Chiodo, Abbigail J. and Michael T. Owyang.** 2002. A Case Study of a Currency Crisis: The Russian Default of 1998. *Federal Reserve Bank of St. Louis Review* 84(6): 7-18. [Link](#)
- Congressional Budget Office.** 2011. *CBO's 2011 Long-Term Budget Outlook*, eds. Christine Bogusz, et al. Washington, D.C.: Congressional Budget Office. [Link](#)
- Department of the Treasury/Federal Reserve Board.** 2011. Major Foreign Holders of Treasury Securities. *Treasury International Capital*, December 15. [Link](#)
- Elmendorf, Doug.** 2009. Harvard University Lecture. Federal Budget Challenges (presentation). *Congressional Budget Office Director's Blog*, April 21. [Link](#)

- English, William B.** 1996. Understanding the Costs of Sovereign Default: American State Debts in the 1840's. *American Economic Review* 86(1): 259-275.
- Financial Management Service, Department of the Treasury.** 2010. *Financial Report of the United States Government*. Washington, D.C.: U.S. Government Printing Office. [Link](#)
- Financial Management Service, Department of the Treasury.** 2011. *Treasury Bulletin* (September). Washington, D.C.: U.S. Government Printing Office. [Link](#)
- Fishlow, Albert.** 1972. Internal Transportation. In *American Economic Growth: An Economist's History of the United States*, eds. Lance E. Davis, et al. New York: Harper & Row, 468-547.
- Friedman, Milton and Anna Jacobson Schwartz.** 1963. *A Monetary History of the United States, 1867-1960*. Princeton: Princeton University Press.
- Gokhale, Jagadeesh and Kent A. Smetters.** 2006. Fiscal and Generational Imbalances: An Update. *Tax Policy and Economy* 20: 193-223.
- Hamilton, James D. and Jing Cynthia Wu.** Forthcoming. The Effectiveness of Alternative Monetary Policy Tools in a Zero Lower Bound Environment. *Journal of Money, Credit, and Banking*. [Link](#)
- Henderson, David R. and Jeffrey Rogers Hummel.** Forthcoming. The Debt Crisis. *Imprimis*.
- Hummel, Jeffrey Rogers.** 1999. Martin Van Buren: The Greatest American President. *Independent Review* IV(2): 255-281. [Link](#)
- Hummel, Jeffrey Rogers.** 2007. Death and Taxes, Including Inflation: The Public versus Economists. *Econ Journal Watch* 4(1): 46-59. [Link](#)
- Hummel, Jeffrey Rogers.** 2009. Why Default on U.S. Treasuries Is Likely. *Library of Economics and Liberty*, August 3. [Link](#)
- Hummel, Jeffrey Rogers.** 2010. Government's Diminishing Benefits from Inflation. *The Freeman* 60(9): 25-29.
- Joffe, Marc.** 2011. A New Approach to Sovereign Ratings. Federal Budget 1977 to 2041 (unpublished supplemental data). *Expect[ed] Loss*, August 2. [Link](#)
- Kiewiet, D. Roderick and Kristin Szakaly.** 1996. Constitutional Limitations on Borrowing: An Analysis of State Bonded Indebtedness. *Journal of Law, Economics, & Organization* 12(1): 62-97.
- Kotlikoff, Laurence J.** 2011. America's Debt Woe Is Worse than Greece's. *CNN*, September 20. [Link](#)
- Krugman, Paul.** 2010a. Debt and Transfiguration. *New York Times. The Conscience of a Liberal*, March 12. [Link](#)
- Krugman, Paul.** 2010b. Bad Analysis at the Debt Commission. *New York Times. The Conscience of a Liberal*, May 27. [Link](#)

HUMMEL

- Langley, Lester D.** 1989. *The United States and the Caribbean in the Twentieth Century*. 4th ed. Athens, Ga.: University of Georgia Press.
- McGrane, Reginald Charles.** 1924. *The Panic of 1837: Some Financial Problems of the Jacksonian Era*. Chicago: University of Chicago Press.
- McGrane, Reginald Charles.** 1935. *Foreign Bondholders and American State Debts*. New York: Macmillan.
- Ransom, Roger L.** 1964. Canals and Development: A Discussion of the Issues. *American Economic Review* 54(3): 365-376.
- Ratchford, B. U.** 1941. *American State Debts*. Durham, N.C.: Duke University Press.
- Reinhart, Carmen M. and Kenneth S. Rogoff.** 2009. *This Time Is Different: Eight Centuries of Financial Folly*. Princeton: Princeton University Press.
- Reinhart, Carmen M. and Kenneth S. Rogoff.** 2010. Growth in a Time of Debt. *American Economic Review* 100(2): 573-578.
- Reznek, Samuel.** 1935. The Social History of an American Depression, 1837-1843. *American Historical Review* 40(4): 662-687.
- Rietz, Justin D.** 2011. Interest Rates During the 2000's: The Federal Reserve vs. a Global Savings Glut. Working paper.
- Sargent, Thomas J.** 2011. Nobel Prize lecture. December 8. [Link](#)
- Taylor, George Rogers.** 1951. *The Transportation Revolution*. New York: Holt, Rinehart and Winston.
- Temin, Peter.** 1969. *The Jacksonian Economy*. New York: W.W. Norton.
- Wallis, John Joseph.** 2001. What Caused the Crisis of 1839? *NBER Working Paper Series on Historical Factors in Long Run Growth* 133. National Bureau of Economic Research (Cambridge, Mass.). [Link](#)
- Wallis, John Joseph.** 2002. The Depression of 1839 to 1843: States, Debts, and Banks. Working paper.
- Wallis, John Joseph.** 2005. Constitutions, Corporations, and Corruption: American States and Constitutional Change, 1842 to 1852. *Journal of Economic History* 65(1): 211-256.
- Wallis, John Joseph, Richard E. Sylla, and Arthur Grinath III.** 2004. Sovereign Debt and Repudiation: The Emerging-Market Debt Crisis in the U.S. States, 1839-1843. *NBER Working Paper* 10753. National Bureau of Economic Research (Cambridge, Mass.). [Link](#)

About the Author



Jeffrey Rogers Hummel is Associate Professor in the Economics Department at San Jose State University, where he teaches both economics and history. He received his Ph.D. in history from the University of Texas at Austin. He is the author of *Emancipating Slaves, Enslaving Free Men: A History of the American Civil War*. His email is jeff@jrhummel.com.

[Go to archive of Watchpad section](#)

[Go to January 2012 issue](#)

[Go to Mercatus Center symposium presentation page](#)



Discuss this article at Journaltalk:
<http://journaltalk.net/articles/5752>



EJW-MERCATUS SYMPOSIUM
U.S. SOVEREIGN DEBT CRISIS:
TIPPING-POINT SCENARIOS AND CRASH DYNAMICS

The Bond Market Wins

Garett Jones¹

[LINK TO ABSTRACT](#)

I used to think if there was reincarnation, I wanted to come back as the president or the pope or a .400 baseball hitter. But now I want to come back as the bond market. You can intimidate everybody.

—James Carville (*Wall Street Journal*, February 25, 1993)

The United States is on an unsustainable fiscal path. How will the federal government address its long-term fiscal problems? There are four possible tools: Higher revenues, lower spending, inflation, and default. The last two hurt bondholders, and are the least likely.

The most likely scenario is one of chronic fiscal contrition, like the 2011 debt limit negotiations, but reenacted every few years. American leaders—driven by rating agencies, examples from overseas, and perhaps a pro-austerity branch of government—huddle together and lop a semi-credible \$2 trillion off of future deficits.

This is just one scenario, and others are possible. It's too early to tell *how* the bondholders are going to stay whole, but their victory is extremely likely. The long-run fiscal crisis is likely to be managed through a combination of tax increases and spending cuts. Below I discuss the most likely cause of default were it to occur: A GOP-led defense of the taxpayer. But in any case, a tipping point, where a AA+ or AA rated U.S. government is unable to borrow one week, is quite unlikely.

1. George Mason University, Fairfax, VA 22030.

In predicting that bondholders will stay whole, I am disagreeing with the view of Laurence Kotlikoff and Scott Burns, who argue in *The Coming Generational Storm* (2004) that the soft default of inflation will be part of the solution to our looming fiscal crisis. I take this position seriously, but come to a different set of conclusions.

Why No Default? Why No Inflation?

One piece of evidence that U.S. default and high inflation are unlikely comes from the bond market itself: Real and nominal interest rates on long-term government bonds are exceedingly low. Investors have not charged the federal government the rates they charge high-risk countries. Further, U.S. long-term real and nominal rates have fallen since the financial crisis, a crisis that hurt expected tax revenues and made it clear that the U.S. government's ability to pay its debtors had deteriorated. If the bond market is deeply worried about the U.S. government's ability to pay its long-run obligations, it is not using market prices to demonstrate its concern.

Another reason to doubt default or hyperinflation is the maturity structure of Treasury debt. The overwhelming majority of US debt is in Treasury notes, investments that last from one to ten years. In recent years, the average loan to the U.S. government has lasted approximately five years. This means that the U.S. is rolling over one-fifth of its debt every year. This gives the market a chance to vote on the federal government's future creditworthiness on a regular basis.

Let us consider an extreme case: If the U.S. planned to inflate or default its way out of the debt in 2020, and the market foresaw that in 2015, markets would instantly stop lending extra money to the U.S. for any period longer than five years, or only lend to it at exorbitant rates of return. Financial markets would bring the planned future default to the present. So planned future defaults, whether hard (partial or total repudiation) or soft (inflation), are almost impossible.

What about partially anticipated defaults? And what about default plans that the markets only begin to anticipate a year or two in advance? In those scenarios the benefits of defaulting are still much lower than an almost-impossible abrupt, surprise default. One reason the benefits of default are likely to be lower than in an abrupt-surprise scenario is that nations that default almost always only partially default. Partly because they want to return to credit markets as soon as possible (especially to borrow in the short-term market, which cities and states use to cover payroll before taxes are paid), nations are reluctant to completely destroy their reputations as borrowers.

Taken together, this means that the incentives to default or inflate are weaker than many imagine. And since market participants quite likely know this fact

already, an overnight fiscal crisis driven by fears of inflation or outright default is less likely than many imagine.

Consider the following scenario: For some reason, markets, all of a sudden, foresee future possible default, and suddenly stop lending to the U.S. as a result. The U.S. is unable to roll over its debt one week, fails to get aid from other countries, and defaults. How unlikely is that possibility? Again, market prices and rating agencies alike tell us that U.S. default is unlikely. Private investors are unwilling to lend at risk-free rates to individuals likely to default in the next few years; we should believe the same about lending to sovereigns. I simply do not find a sudden-default scenario likely.

Demographics provide another reason why default and inflation are unlikely solutions: Because of its high birthrate, the U.S. is likely to be one of the last rich countries to reach its debt peak. That means that the U.S. will likely watch the default-or-not decision played out time and time again in other prosperous countries. Defaulting lowers a nation's status in the world pecking order, and after Americans watch a nation or two default on their obligations and become an object of ridicule, they will prefer alternatives to default.

But as the baby boomers age and debt approaches its projected peak, won't voters rationally support default? If voters thought that their decisions were decisive—if they believed they were each the political scientist's "pivotal voter"—they might well do so. Once the money has been borrowed to fund and care for the baby boomers, it could well be rational to repudiate the debt, even if it meant no borrowing for decades.

But since individual voters cannot change election outcomes, they will not carefully weigh benefits and costs of default. Instead, they will place massive weight on symbolism and status-group affiliation—they will allow their feelings to abuse the facts of the matter. It is quite unlikely that defaulting nations will be considered high-status, so voters will be reluctant to support politicians who support default. Politicians who support default will likely find themselves turned out of office, a fact that foresighted politicians will keep in mind. Tax increases and spending cuts are acrimonious, but not shameful. Default is shameful.

Finally, crude public choice suggests that default is unlikely: U.S. Treasuries make up well over 10% of U.S. bank assets, a figure that spiked upward in the wake of the financial crisis. And the political influence of the banking sector on U.S. economic policy is beyond doubt, as the bailouts, credit lines, and ring-fences of 2008 and 2009 illustrated. The twin votes on TARP provide further evidence: Ramirez (2011) shows that politicians who switched their votes from "No" to "Yes" on the 2008 bank bailout bill were quite likely to be those who received more campaign donations from the banking industry. Such a politically connected sector

would do everything possible to ensure that their investments in U.S. Treasuries pay off.

What Happens in a No-Default World?

If the U.S. avoids both hard and soft default, what is the likely set of outcomes? The most likely is some combination of massive tax increases and massive cuts in projected government health care spending. While it is conceivable that a once-and-for-all deficit deal would last for decades—as the 1983 Social Security reforms did—more likely there will be a series of temporary packages. There will certainly be some “permanent” changes to entitlement programs, but these will always be open for review by future Congresses. This will be true especially on the health-care side, where new innovations or the lack thereof and the relative political power of providers and recipients will drive the politics of health care for decades to come.

The size of the U.S. fiscal gap is well known. The Congressional Budget Office (2011), the IMF (2011), and Auerbach and Gale (2009) have all created estimates that indicate that the federal government must close a annualized long-run fiscal gap that is possibly larger than the size of the Department of Defense.

The two leading proposals for long-term fiscal consolidation—the Simpson/Bowles plan and the Ryan plan—give a sense of what is needed to close the gap. Both rely on cuts to projected health care spending as their biggest source of savings. The Ryan plan entirely avoids tax increases by converting Medicare into a lump-sum insurance premium support payment that grows at the rate of inflation—and since nominal health care costs are expected to rise faster than inflation, the Ryan plan is an ever-growing cut to real expenditures on Medicare coverage.

Both plans are valuable for their candor in illustrating that the U.S. long-term fiscal situation is far from healthy. They also implicitly illustrate how hard it will be *politically* to achieve balance in a no-default scenario. Since soft or hard default are both unlikely, I anticipate something within the range of the Simpson/Bowles and Ryan plans to be enacted, perhaps in pieces over many years. But cutting health care spending to the elderly, who vote at high rates, will be politically costly, so politicians will look for alternatives. And in a no-default world, the most likely alternative will be tax increases. This brings us to the greatest barrier to solvency: the Republican Party.

A No-New-Taxes Populace: The Bondholder's Enemy

The strongest argument against my no-default position is that U.S. political Right is exceptionally unwilling to raise taxes: As long as the GOP holds enough sway in at least one branch of government to block a tax increase, the GOP will be a genuine political force. All countries have strong political forces fighting against spending cuts: What makes the United States unique among developed countries is its powerful anti-tax movement. Bondholders will legitimately be worried that the anti-tax movement will become a barrier to repayment, a cause of default.

The most likely form of default is an ostensibly “accidental default”: Politicians bargain for weeks on end and fail to meet a key deadline for rolling over the debt or for raising the debt ceiling. In this environment, markets might decide against rolling over loans to an untrustworthy debtor, forcing a default of at least a few days, a default that would scar the U.S. financial landscape, making a full-blown default likely with a few months.

We saw a training-run version of this in 2011: Some on the anti-tax-increase side argued that the U.S. government could stop all “non-essential” spending or sell off assets to avoid breaching the U.S. debt ceiling. Unusual options became live options. And once *some* unusual options become live, bondholders reasonably wonder whether the unusual option of default will become the newest live option.

In the long run, bondholders get paid from the gap between government revenues and government spending. In most rich countries, the revenue lever and the spending lever are both tools that politicians can manipulate in order to leave enough to repay the lenders.

In the United States, by contrast, as long as a no-new-taxes GOP holds an effective veto over at least one branch of government, the revenue lever is unresponsive. Bondholders prefer a pliant populace, and they don't have that in the United States. This is why it's reasonable (not necessary, but reasonable) for Treasury bondholders to believe that anti-tax, anti-spending movements are bad news from their point of view. Anti-spending movements are quite often cheap talk; anti-tax movements, less so. That may be good news for net taxpayers, but it is bad news for lenders.

“Starve the Beast”: A Barrier to Solvency and Smaller Government?

Does rigorous evidence support the claim that tax fighters increase deficits? Does it support the related claim that deficits tend to increase government spending? Buchanan and Wagner make the second claim:

Debt financing reduces the perceived price of publicly provided goods and services. In response, citizen-taxpayers increase their demands for such goods and services. Preferred budget levels will be higher, and these preferences will be sensed by politicians and translated into political outcomes. (Buchanan and Wagner 1977, 8.9.35)

Gale and Orszag have made a related claim:

The “starve the beast” strategy may simply not work as a political equilibrium. We have in mind that policymakers jointly go through periods of fiscal restraint and fiscal largesse, and the restraint or largesse occurs simultaneously on both the tax and spending sides. (Gale and Orszag 2004, 999)

The latter authors refer to the periods of restraint as “coordinated fiscal discipline” (1000). Politically, periods of diet and exercise alternate with periods of sloth and gluttony. And from a politician’s perspective, a tax cut may feel quite gluttonous.

These positions stand in contrast to the “starve the beast” position made famous by Milton Friedman (2003), George Will (1978) and other limited-government thinkers (see citations in New 2009). In this view, the politically acceptable deficit is close to exogenous, fixed by some combination of political tastes and financial markets, and thus a tax cut causes a spending cut. Under Buchanan and Wagner-style fiscal illusion, by contrast, a tax cut lowers voters’ perceived relative price of government and increases the demand for government spending.

For the federal government, which view is closer to the evidence? Considering the importance of the question, it is surprising that so little empirical work exists to answer it: The empirical question has been left mostly to op-eds and anecdotes. But some data-driven work exists for the United States, and it tentatively favors the fiscal illusion position. Niskanen (2006) uses time-series evidence to show that controlling for the vagaries of the business cycle, times of lower taxes

are times of higher, not lower, government spending. Romer and Romer (2009) use a narrative approach to search for exogenous changes in tax policy, finding no evidence that tax cuts starve the beast and weak evidence that tax cuts predict higher spending.

These studies find no evidence that tax restraint curtails government spending at the federal level in the United States. And it is not as though such evidence cannot be found, or cannot be published in academic journals: At the U.S. state level, “starve the beast” is widely studied under the rubric of statutory and constitutional tax limitations, finding modest-to-negligible evidence in its favor (Bails 2006; Mitchell 2010). States and localities are less able to borrow cheaply and readily; this may help explain the modest evidence for the beast-starving below the federal level.

A final form of evidence for federal fiscal illusion comes from survey data: Ura and Socker (2011) find that survey respondents are more supportive of higher domestic spending after a rise in budget deficits, just as Buchanan and Wagner would predict. Their work does not look at the change in demand for government after a change in tax policy, so it is an imperfect test of “starve the beast,” but with so little data on such an important question, every piece of evidence is welcome. At this point, there is no rigorous evidence that tax-limitation efforts at the federal level have curtailed the size of government in past decades, and modest evidence these efforts have increased both the demand for and the supply of government.

A fortiori, this means that federal tax limitation efforts have had even larger effects on the federal debt: a one dollar tax cut would need to cut spending by exactly one dollar to have no effect on the debt, and the evidence to date suggests that a one dollar tax cut, if anything, *increases* spending. But even if future evidence finds that a dollar of tax cuts causes a 25-cent decline in spending, this is bad news for bondholders. For “starve the beast” to earn even a C among bondholders, it needs an A+ among supporters of smaller government.

Democrats as the Party of Bondholders

The financial services industry donates to both parties, and politicians of both parties have “retired” to lucrative jobs at Treasury-holding investment banks, so raw political interest suggests some incentive for both parties to please their supporters. But which of the two parties will actually vote the way these supporters would like?

Political scientists have tracked how Republican and Democratic members of Congress differ. Polsby and Schickler (2002, 175) summarize a classic finding of Mayhew (1966) as follows: “Democrats...always vote to sustain their constituent

interests; Republicans tend to vote on principled grounds even against their constituents and allies.” In recent decades, party unity has massively increased in both political parties (Sides 2011), but the GOP’s reputation as a barrier to revenues is salient. The no-tax-increase principle dominant in today’s GOP is likely on the minds of Treasury bondholders around the world. Bondholders’ best hope is that the GOP will lose power from time to time, opening brief windows for pro-solvency tax increases.

With the GOP reluctant to raise taxes to meet bond obligations, and with both parties reluctant to cut health care spending for the elderly, bondholders will pay particular attention to years when the GOP—especially the Congressional GOP—is out of power. These will be the times bondholders can hope that government will use its tax lever. If tax increases are not forthcoming in years of Democratic ascendancy, this will bode ill for bondholders. Ironically, crises may be most likely in years when the tax-hiking party is in power, because Democratic inaction will send a stronger signal to bondholders than Republican inaction.

Conclusion

Default is unappealing to voters, unlikely to rescue our fiscal position, and unforetold in market prices. Hence, I predict that both soft and hard defaults are extremely unlikely in the United States.

The caveats to that position lie in the no-new-taxes position of the modern Republican Party: Bondholders, concerned about principal, not principle, will see the GOP as the key political barrier to repayment. All developed countries have strong pro-spending constituencies; the anti-tax movement is unusually strong in the United States, and it will receive unusual attention from investors the world over.

References

- Auerbach, Alan and William Gale.** 2009. The Economic Crisis and the Fiscal Crisis: 2009 and Beyond. *Tax Notes* 125(1): 101-130.
- Bails, Dale G.** 2006. The Effectiveness of Tax-Expenditure Limitations: A Re-evaluation. *American Journal of Economics and Sociology* 49(2): 223-238.
- Buchanan, James M. and Richard E. Wagner.** 1999 [1977]. *Democracy in Deficit: The Political Legacy of Lord Keynes*. Indianapolis: Liberty Fund. [Link](#)

- Congressional Budget Office.** 2011. *CBO's 2011 Long-Term Budget Outlook*, eds. Christine Bogusz, et al. Washington, D.C.: Congressional Budget Office. [Link](#)
- Friedman, Milton.** 2003. What Every American Wants. *Wall Street Journal*, January 15. [Link](#)
- Gale, William and Peter Orszag.** 2004. Bush Administration Tax Policy: Starving the Beast? *Tax Notes* 105(8): 999-1002.
- Kotlikoff, Laurence and Scott Burns.** 2004. *The Coming Generational Storm*. Cambridge: MIT Press.
- International Monetary Fund.** 2011. The United States: 2011 Article IV Consultation. *IMF Country Report* 11/201. International Monetary Fund (Washington, D.C.). [Link](#)
- Mayhew, David.** 1966. *Party Loyalty Among Congressmen: The Difference Between Democrats and Republicans, 1947-1962*. Cambridge: Harvard University Press.
- Mitchell, Matthew.** 2010. TEL It Like It Is: Do State Tax and Expenditure Limits Actually Limit Spending? *Mercatus Center Working Paper* 10-71. George Mason University (Arlington, Va.). [Link](#)
- New, Michael J.** 2009. Starve the Beast: A Further Examination. *Cato Journal* 29(3): 487-495. [Link](#)
- Niskanen, William.** 2006. Limiting Government: The Failure of “Starve the Beast.” *Cato Journal* 26(3): 553-558. [Link](#)
- Polsby, Nelson and Eric Schickler.** 2002. Landmarks in the Study of Congress Since 1945. *Annual Reviews of Political Science* 5: 333-367.
- Ramirez, Carlos D.** 2011. The \$700 Billion Bailout: A Public-Choice Interpretation. *Review of Law & Economics* 7(1). [Link](#)
- Romer, Christina D. and David H. Romer.** 2009. Do Tax Cuts Starve the Beast? The Effect of Tax Changes on Government Spending. *Brookings Papers on Economic Activity* 1: 139-214.
- Sides, John.** 2011. The Parties Really Are Unified. *The Monkey Cage*, January 5. [Link](#)
- Ura, Joseph Daniel and Erica M. Socker.** 2011. The Behavioral Political Economy of Budget Deficits: How Starve the Beast Policies Feed the Machine. *The Forum* 9(2). [Link](#)
- Will, George F.** 1978. Reining in the Federal Spending Urge. *Washington Post*, July 27: A27.

About the Author



Garrett Jones is Associate Professor in the Department of Economics and BB&T Professor for the Study of Capitalism at the Mercatus Center at George Mason University. His research areas include the monetary transmission mechanism, the link between intelligence and national economic outcomes, and the microfoundations of stimulus spending. He is associate editor of the *New Palgrave Dictionary of Economics*. His email is jonesgarrett@gmail.com.

[Go to archive of Watchpad section](#)

[Go to January 2012 issue](#)

[Go to Mercatus Center symposium presentation page](#)



Discuss this article at Journaltalk:
<http://journaltalk.net/articles/5753>



EJW-MERCATUS SYMPOSIUM
U.S. SOVEREIGN DEBT CRISIS:
TIPPING-POINT SCENARIOS AND CRASH DYNAMICS

How a Default Might Play Out

Arnold Kling¹

[LINK TO ABSTRACT](#)

In finance textbooks and in the markets, United States Treasury securities are treated as default-free assets. People assume that under any circumstances, the United States government will pay principal and interest as scheduled. Could this assumption change? If so, what would be the consequences? This essay examines these questions.

From the outset, I should emphasize that at the core of this issue are expectations about future political decisions. Thus, much of what I will be discussing is outside the competence of ... well, anybody, making the exercise highly speculative.

My speculations come together under the following headings:

1. The U.S. government has made a set of promises that it cannot keep.
2. The current level of outstanding debt is a relatively small part of the problem.
3. Therefore, inflation is unlikely to solve the problem.
4. The promises that are most important to change are Social Security and Medicare.
5. It is easy to assemble a blocking coalition against changes.
6. At some point, investors may see default as a realistic possibility. This can quickly produce a crisis, because it would lead to higher interest rates and would force the government to make tough decisions.
7. The resolution of a crisis would likely take the form of a negotiated default, rather than a unilateral default or a one-party political cave-in.

1. Mercatus Center at George Mason University, Arlington, VA 22201.

The U.S. government has made a set of promises that it cannot keep.

In June of 2011, the Congressional Budget Office (2011) published its annual *Long-Term Budget Outlook*. The “alternative fiscal scenario,” which is based not on existing law but instead estimates a continuation of past policy patterns, shows the ratio of debt held by the public to GDP climbing from less than 75 percent today (it was less than 40 percent prior to the financial crisis of 2008) to 187 percent in 2035, with an ever-increasing ratio thereafter.

At such a high ratio of debt to GDP, the fiscal outlook becomes highly dependent on the interest rate. If debt is 180 percent of GDP, then at an average interest rate of 2 percent interest payments will be 3.6 percent of GDP. However, at an average interest rate of 10 percent, interest payments would be 18 percent of GDP. With primary spending (on everything other than interest) of 25 percent of GDP, the higher interest rate scenario would imply total federal government spending of 43 percent of GDP, more than double the historical average.

For expenditures in the year 2035 the CBO projects the following percentages of GDP (in parentheses is the 2011 percentage):

- Social Security: 6.1 percent (4.8)
- Medicare: 6.7 percent (3.7)
- Medicaid and other health care: 3.7 percent (1.9)
- Other non-interest spending: 8.5 percent (12.3)
- Interest 8.9 percent (1.4)

As a percentage of GDP, the obligations under Social Security, Medicare, and other health care programs are projected to rise more than other non-interest spending will fall. Hence, the primary deficit (that part of the deficit that does not include interest payments) will be increasing over the next two decades. A primary deficit cannot increase indefinitely.

The CBO projections indicate that the U.S. government will spend more money than it is likely to obtain in tax revenue, and it thus will be borrowing increasing amounts of money to fund its obligations. Once the interest rate on that borrowing gets to be too high, it will have to stop meeting its obligations. That means either squeezing non-interest spending further, suddenly cutting benefits for Social Security and health care, or suspending payment on its debt instruments.

Imagine that our government announces now that in 2035 it will spend, as the CBO projects, 6.1 percent of GDP on Social Security, 10.4 percent on Medicare, Medicaid, and other health care programs, and 8.9 percent on interest. It is doubtful that the government will be able to find the revenue (taxes plus borrowing) to pay for such spending. An interest-rate spike would make it even

more doubtful. Thus, it is fair to conclude that the U.S. government has made spending promises that it is not in a position to keep.

The current level of outstanding debt is a relatively small part of the problem.

Most of the alarming accumulation of debt is still in the future. As of 2011, debt held by the public amounted to 69 percent of GDP, but CBO projects that this will rise to 187 percent of GDP in 2035. This projection reflects the rise in the primary deficit (driven by Social Security and health programs), higher interest rates as the economy emerges from recession, and higher interest payments in order to service an ever-growing debt. Between 2011 and 2035, these spending categories are projected to rise from 11.8 percent of GDP to 25.4 percent of GDP.

Therefore, inflation is unlikely to work as a solution, even if it were attempted.

For a country that has accumulated a large debt, one option is to reduce the real value of the debt by inflating. If you have incurred a debt of \$1 billion in the past, then paying back the debt in inflated dollars can reduce its real burden.

For the United States today, the inflation option, even if it were tried, would not be so effective. The problem is that the three growing categories of spending are Social Security, health programs, and interest on the debt. All of these tend to rise with inflation. Social Security payments are indexed to consumer prices. Health care reimbursements are tied to prices in health care, which presumably will increase faster as overall inflation rises. And investors in Treasury securities can be expected to demand higher interest rates in response to inflation.

Thus, our situation differs from the end of World War II, when we had accumulated a ratio of debt to GDP of close to 100 percent. At that time, our existing debt burden was high relative to the obligations accrued going forward. Thus, an inflation shock would tend to reduce the real burden of debt by allowing the government to pay back in depreciated dollars. That is much less true today, because so much of the fiscal shortfall is now in forward obligations that will tend to rise with inflation.

The promises that are most important to change are Social Security and Medicare.

With other non-interest spending already projected to decline relative to GDP, the key to reducing the primary deficit will be to make changes to Social Security, Medicare, and other health care spending. These programs are projected by CBO to rise from 10.4 percent of GDP today to 16.5 percent of GDP in 2035.

Over the years, a number of proposals have been made for improving the fiscal health of the Social Security system. These include raising the payroll tax rate, making greater use of means testing, changing the indexing formula so that benefits are linked to prices rather than to wages (which would keep recipients from reaping the gains from productivity increases), and raising the age of eligibility for benefits.

To reduce government spending on health care, some kind of reform is required. Broadly speaking, this could be “top-down” or “bottom-up.” Top-down rationing would involve government officials determining which procedures will be eligible for reimbursement under federal programs. Bottom-up reform would involve converting some or all of these programs to vouchers, with households then determining which medical procedures to forgo, and the government simply reducing the amounts given in vouchers.

It is easy to assemble a blocking coalition against changes, especially in Medicare.

Here, I am making a political assessment. It strikes me that changes to Social Security and Medicare face generic and ideological opposition.

Generic opposition to change comes from those who want to keep the programs as they are. Retirees and people nearing retirement would tend to fall in this category.

Ideological opposition comes from partisans who are willing to see changes to programs, but who reject certain types of changes. For example, on Social Security, Republicans tend to be ideologically opposed to tax increases while Democrats tend to be ideologically opposed to benefit cuts. On Medicare, Republicans tend to be ideologically opposed to top-down rationing, while Democrats tend to be ideologically opposed to bottom-up choice.

There is a significant probability that by combining ideological opposition and generic opposition, a blocking coalition can readily be formed against any proposed changes to these programs. Thus, even though the need for major reform is evident, it might be that, for every major reform, even once the effort is taken up, its political prospect is only slight.

Another alternative that might be considered under threat of default is a tax increase, leaving the entitlement programs more or less as they are. There are two reasons to believe that this also will be politically blocked. First, if entitlement obligations are still projected to grow faster than GDP, then tax increases will not provide a credible long-term solution. Second, if the two political parties are unable to agree on a compromise that combines entitlement cuts with tax increases, it seems even less likely that they would agree on tax increases alone.

At some point, investors may see default as a realistic possibility. This can quickly produce a crisis, because it would lead to higher interest rates and would force the government to make tough decisions.

Interest rates are affected by perceived risk. For example, from 2002 through 2007, the interest rates on debt issued by Freddie Mac and Fannie Mae were generally less than 40 basis points above the interest rates on comparable securities issued by the U.S. Treasury. This allowed the two agencies to borrow at relatively low interest rates and profit from the spread on higher-earning assets.

However, starting in late 2007, investors began to have doubts about the viability of these two entities. They began to demand compensation for the increase in perceived risk, so that by the late summer of 2008 the spread over Treasuries had widened to over 150 basis points.² The higher borrowing costs drastically eroded the profitability of these companies. Had they been fully private enterprises, this would have caused a death spiral, as higher interest costs reduced their financial viability, raising interest costs further, until they would have had to declare bankruptcy. They could survive only with full government support; to minimize the cost of this support the Treasury took the two firms into conservatorship. What this episode illustrates is that a loss of confidence can be quite sudden and quite devastating for an entity that relies heavily on borrowing.

When it comes to risk premiums, a borrower tends to find itself in one of two possible states. In a high-confidence state, creditors have an assessment of the borrower's financial condition that is relatively optimistic and stable. In a low-confidence state, the creditors have pessimistic and falling confidence. As we saw above with the examples of Freddie Mac and Fannie Mae, a low-confidence state becomes self-fulfilling, because high interest costs make it impossible for the borrower to meet all of its obligations.

The transition from a high-confidence state to a low-confidence state is inherently rapid, discontinuous, and impossible to predict in advance. If you knew

2. See James R. Barth, Tong Li, and Triphon Phumiwasana (2008), which also documents the behavior of other interest-rate spreads during the crisis.

that other investors were going to lose confidence next month, then you would try to reduce your credit exposure today. If all investors try to reduce their credit exposure today, then the crisis will be upon us immediately.

The fundamental question about sovereign debt is whether the government will be able to make effective and necessarily drastic changes in a low-confidence state. In a low-confidence state, investors will want to see a credible program to reduce the ratio of debt to GDP. The question will be whether the government has the political strength to make the necessary changes to its budget.³

In the case of sovereign debt, think of the investors as spectators watching a swimmer float down a river toward a waterfall. The spectators believe that if the swimmer changes direction and swims toward shore in time, the swimmer will be safe. If the spectators perceive that the swimmer has passed the point where he can save himself, they will not want to bet that the swimmer survives.

However, suppose that the swimmer's chance to survive depends in part on the spectators' confidence. In that case, guessing the swimmer's fate requires guessing how the other spectators will gauge the swimmer's chances. This is analogous to Keynes' famous depiction of the stock market as a beauty contest in which the challenge is to guess the contestant that other spectators will regard as most beautiful.

At the moment, interest rates on U.S. Treasury securities are low. This fact indicates that investors in U.S. government debt apparently believe that the fiscal swimmer will change direction in time to reach the shore. However, the longer the fiscal swimmer continues toward the waterfall, the greater the risk that investors will change their assessment. Once enough investors become pessimistic, a descent into the waterfall becomes unavoidable.

As long as investors are confident in a government, the government will not default. Instead, the government will exploit investor confidence to borrow whatever it needs to continue functioning. Thus, Japan has been able to continue to borrow, even though its debt to GDP ratio is over 200 percent.

If investors lose confidence in a government, there are two possible outcomes. One is that the government is able to repay its debt and the investors are proven wrong. The other is a default.

To be able to repay its debt after a loss of confidence, a government will require a bailout along with fiscal policy changes. Earlier in 2011, European leaders attempted to use a combination of a bailout and fiscal austerity to resolve the crisis in Greece. Had this approach been successful, investors who thought that Greek debt was too risky to buy would have missed out on an opportunity.

3. For illustrations of this two-state idea, see Kling (2010).

The other possible outcome is a default, which became the de facto outcome for Greece. The bailout and the austerity proved insufficient, and the terms of Greek debt were renegotiated to the detriment of creditors. Those who spurned Greek securities because of risk turned out to have been correct.

Overall, the relationship between government behavior and investor confidence is delicate. The longer the government goes without addressing fiscal sustainability, confidence falls. If confidence suddenly falls, the government no longer can afford its borrowing costs. This can lead to a situation where the government fails its creditors.

What would trigger a sovereign debt crisis for the United States? One scenario might be a situation in which Congress comes close to an agreement to produce a sustainable budget, but it is derailed by an unexpected event. For example, suppose that some key supporters of the agreement suffer surprising defeats in an election. The unraveling of the agreement might be the “last straw” for investors, leading to a rapid loss of confidence.

The resolution of a crisis would likely take the form of a negotiated default, rather than a unilateral default or a one-party political cave-in.

A unilateral default is when the government unilaterally decides to suspend debt repayment or to reschedule its debt. For a government facing a fiscal crisis, unilateral default is not attractive, because it would result in being shunned by investors and international lending institutions. Since a government in crisis is likely to be running a primary deficit, the inability to borrow new money forces exactly the sort of fiscal austerity that the government wishes to avoid.

A negotiated default is a mutual agreement between a government and lenders to write down or reschedule debt. Because it is a mutual agreement, the government may continue to borrow to fund its deficit.

Mutual agreement requires multilateral negotiations. The International Monetary Fund routinely brokers such agreements, and it might also do so for a U.S. crisis. The IMF is likely to negotiate a combination of fiscal austerity measures to be enacted by the government and debt forgiveness to be provided by creditors. Creditors must be satisfied that the IMF has “squeezed” the government as hard as possible, and the government must be satisfied that under the circumstances it has gotten the best deal possible with creditors. The IMF can “sweeten the pot” for both parties by providing loans from its own resources to “facilitate the transition” as the government adjusts its policies and lenders reduce their exposure. The IMF also will act as a sort of “financial control board,” with power to insist that budget actions conform to certain guidelines. This will provide external pressure to overcome the domestic political gridlock.

One way to avoid a negotiated default would be a cave-in by one political party. For example, if interest rates soar, Democrats could agree to immediate spending cuts and restructuring of entitlements. Alternatively, Republicans could agree to immediate significant tax increases.

My assumption is that both parties would prefer a negotiated default to caving in. With a negotiated default, the IMF would produce guidelines for tax and spending policy. The Democrats would have to accept fewer spending cuts than if they were to cave, and the Republicans would have to accept smaller tax increases than if they were to cave. The external guidelines would give both political cover to vote for compromises that would otherwise anger their bases.

Sovereign creditors would be likely to bear most, or even all, of the losses from a debt write-down that occurs as part of a negotiated default. Even so, these creditors would have reason to prefer a negotiated default rather than allow the crisis to worsen. The negotiated default would reduce the uncertainty of the world economic environment. It also would give creditors, via the IMF or financial control board, leverage over U.S. policy.

In a crisis situation, the balance among government austerity measures, debt rescheduling, and IMF lending is determined by relative negotiating strength. When the country in crisis is relatively small, creditors are in a strong position, because the lending resources required to see the government through an austerity program are small relative to the capacity of the IMF. When the country's government is fragile, this paradoxically puts the government in a stronger negotiating position, because the IMF will not want to push for austerity that is so severe that it causes the government to fall.

Let us consider how this would play out in the event of a loss of confidence in the ability of the U.S. to meet its obligations. Under such a scenario, the hole in the U.S. budget is likely to be too large to be filled by an IMF loan. Consequently, creditors will be in a weak negotiating position. If the U.S. government is deadlocked (for example, with different branches of government controlled by different parties and strong partisan divisions, as now, going into the 2012 election), it will be in a strong negotiating position. That is, an IMF proposal for austerity that is too severe may stand little chance of being enacted.

If creditors are in a weak position and the government is in a strong position, then it becomes likely that a negotiated agreement will include some form of debt restructuring. The IMF will force as much austerity on the U.S. fiscal system as the political realities will allow, and the rest of the fiscal gap will be closed by a negotiated default.

It would seem reasonable to suppose that the U.S. would give up some of its sovereignty in the event of default. That is, in order to be able to resume borrowing in international credit markets, the U.S. would have to agree to IMF conditions

going forward. The content of those conditions would be determined by the key lending countries. So, for example, if China wanted the United States to reduce defense spending as a condition for continued lending, the IMF would require lower defense spending as part of the negotiated default agreement.

Indeed, much of global politics and economics would be altered by a negotiated default. United States Treasury securities would lose the status of a “safe haven” asset and the dollar would lose its status as a reserve currency. International investors would seek out some alternative. That might involve gold or real estate or the financial claims issued by other countries. It is difficult to forecast what such a world would be like, other than it would be quite different from the world we live in today.

References

- Barth, James R., Tong Li, and Triphon Phumiwasana.** 2008. The U.S. Financial Crisis: Credit Crunch and Yield Spreads. *Asia-Pacific Economic Association Annual Conference*, December 13. [Link](#)
- Congressional Budget Office.** 2011. *CBO's 2011 Long-Term Budget Outlook*, eds. Christine Bogusz, et al. Washington, D.C.: Congressional Budget Office. [Link](#)
- Kling, Arnold.** 2010. Guessing the Trigger Point for a U.S. Debt Crisis. *Mercatus Center Working Paper* 10-45. George Mason University (Arlington, Va.). [Link](#)

About the Author



Arnold Kling is a member of the Financial Markets Working Group of the Mercatus Center at George Mason University. He is the author of five books, most recently *Unchecked and Unbalanced: How the Discrepancy Between Knowledge and Power Caused the Financial Crisis and Threatens Democracy*. He writes for econlog.econlib.org. His email is arnold@arnoldkling.com.

[Go to archive of Watchpad section](#)

[Go to January 2012 issue](#)

[Go to Mercatus Center symposium presentation page](#)



Discuss this article at Journaltalk:
<http://journaltalk.net/articles/5754>



EJW

ECON JOURNAL WATCH
Scholarly Comments on
Academic Economics

ECON JOURNAL WATCH 9(1)
January 2012: 60-70

EJW-MERCATUS SYMPOSIUM
U.S. SOVEREIGN DEBT CRISIS:
TIPPING-POINT SCENARIOS AND CRASH DYNAMICS

Courting an Avoidable Financial Crisis

Joseph J. Minarik¹

[LINK TO ABSTRACT](#)

Imagine a story that is a cross between *The Guns of August*, a tragedy in which the princes of Europe blunder into the horror of World War I, and *Catch-22*, a wartime comedy driven by situations of hopeless internal contradiction.

The United States, and other nations around the world, already have sailed far off of their financial and fiscal charts. No one can say with certainty what will happen if we remain on our current course, because we have never been here before. Nonetheless, with a little imagination, one can draw a straight line between a reasonable conception of our current location and a tragic financial meltdown defined by those two classics of fact and fiction. As uncertain as the future is, this scenario arguably can serve as a plausible cautionary tale.

* * *

Before offering tales of the future, however, I should say a bit about how I see the present.

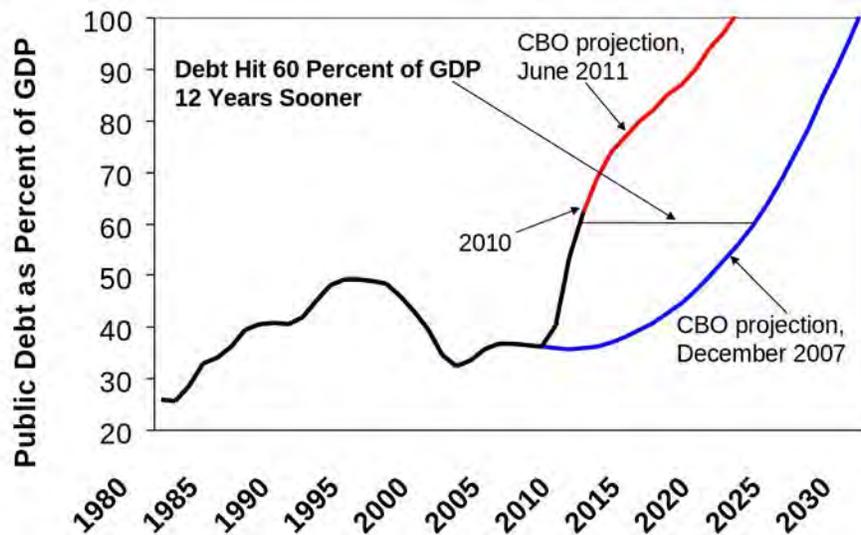
The United States is less central to the financial and economic universe than it was a few years ago. But it is still the closest thing that the global economy has to a flywheel. More than any other nation, the United States could shake the entire world.

1. Committee for Economic Development, Washington, DC 20036.

Today's financial risk arises largely from U.S. fiscal misbehavior.

Four years ago, scholars feared that by 2022 the U.S. public debt would reach 60 percent of the GDP (the European Monetary Union's prudential limit)—driven largely by healthcare costs for the elderly population. That projection is shown in Figure 1 with the blue line.² But, as indicated by the black line³ tracing historical data, that projection has gone out the window. The red line⁴ shows the outlook as of the end of 2010—when the debt had already exceeded 62 percent. Debt continues to rise rapidly—with the worst effects of aging and healthcare costs still looming, as is shown in Figure 2.⁵

Figure 1. Sudden worsening of an already dire problem



Now the Congressional Budget Office projects that, on our current course, the debt will reach the end-of-WWII record level of almost 109 percent by 2023. The new projection is shown in Figure 3.⁶

In 1946 the economy was poised for growth through added labor and capital, and ending the war quickly slashed spending by 30 percent of the GDP, solving the debt problem. Today, the nation has a financially wounded economy subject to intense international competition, with a much larger population in or near

2. Data from Table 7.1 in Office of Management and Budget (2011).

3. Data from Figure 1-2, Alternative Fiscal Scenario, in Congressional Budget Office (2007).

4. Data from Figure 1-2, Alternative Fiscal Scenario, in Congressional Budget Office (2011).

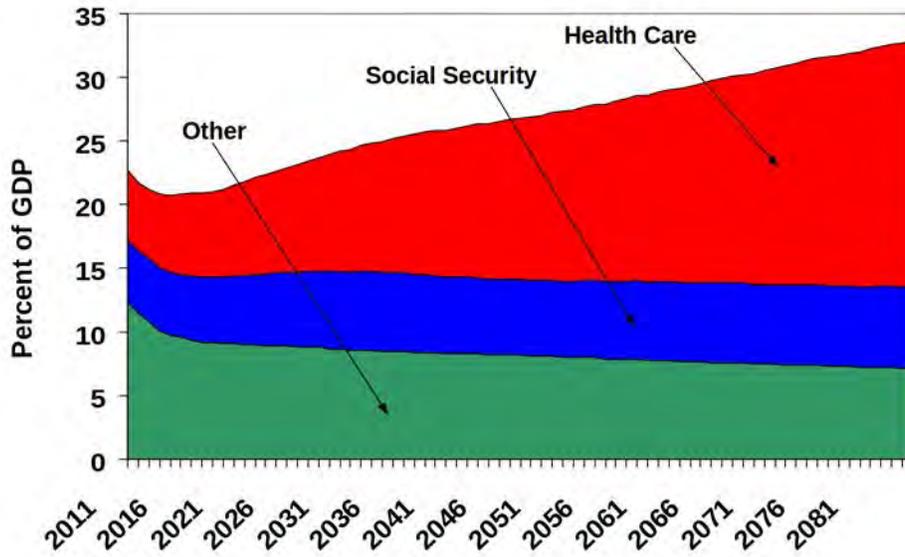
5. Data from Figure B-1, Alternative Fiscal Scenario, in Congressional Budget Office (2011).

6. Data from Table 7.1 in Office of Management and Budget (2011).

dependency in retirement, and defense spending near the low post-World War II levels. The risks are far greater and the remedies are far from obvious.

By international comparison, the United States now has the ninth highest public debt burden among OECD members.⁷ All eight nations with larger debts are widely cited as being in trouble, as are several nations with lower debt burdens.

Figure 2. Non-interest spending growth



Faced with today’s crisis, our political leaders show many of the attributes of those who stumbled, unaware or uncomprehending, into World War I. They evidence ideological certainty and enmity between the political parties.

Politicians’ behavior has shown a lack of intestinal fortitude, ranging from an unwillingness to present the electorate with bad news that is obvious to experts, to a willingness to take risks with the well-being of the nation in the hope of political gain. Candidates often either refuse to acknowledge the seriousness of our financial and fiscal problems or promise that they can be solved without pain (or even through self-indulgence). Also, it is clear that our elected policymakers are far from expert on these issues.

To be sure, these problems are not the sole responsibility of our elected leaders, who are responsive to popular opinions that are often uninformed or

7. Annex Table No. 32 ([link](#)) in Organisation for Economic Co-operation and Development (2011). The text references 2010 rather than later years, which rely on projections. For 2011 and 2012, the OECD data rank the United States as having the seventh-highest debt burden.

misinformed. In a stage of technological evolution beyond the rowdy 20th century mobs who cried for a war whose consequences they did not understand, unschooled ideologues using the new 24/7 Internet often confirm and reinforce each other's misperceptions. In a moment of decision, a loud and foolish minority could intimidate its nation's leaders into fundamental miscalculation and missteps, including a refusal to accept constructive compromise to avoid a crisis.

Figure 3. A longer-term view: Debt approaches World War II levels



Some candidates for office may themselves know better but believe that electoral success is impossible unless they make unrealistic commitments. U.S. politicians will not receive credit for solving a problem that many refuse to believe they have—sometimes out of sheer ignorance, sometimes schooled by widely propagated but baseless ideology. Perhaps some more-understanding candidates say what is necessary to achieve election now, hoping or planning to educate and change the views of the electorate later.

The U.S. business community might be expected to play a leadership role, and to educate and stabilize the public. However, popular opinion of the business community is low, fairly or unfairly, because of the scandals of the late 1990s and business's alleged role in the financial crisis of 2007-2009 and the resultant popular hardship. Business is perceived by many to earn large profits disproportionately from foreign operations while unemployment is high at home, and to sit on large reserves of cash that could be used to finance investment in plant and equipment.

From business's perspective, there is diverse opinion about policy options, at least in part because in this economic environment there is a wide range of threats to different firms. Large businesses that can sell fixed-rate bonds in the open market can capitalize on the current low interest rates and may perceive little or no downside based on their experience of past economic cycles. Their leaders may in fact fear the consequences of a potential remedy to the fiscal problem more than the downside of the problem itself. On the other hand, smaller businesses that must borrow from banks at variable interest rates face the danger of a spike in rates. But small businesses have less expertise and less voice and influence.

Expectations tend to be formed from past experience. But because the major economies have sailed off of the historical charts, big businesses might be in more danger than they realize. They could be caught out if a meltdown causes serious and unexpected economic dislocation that reduces demand from consumers and from smaller businesses, which remain at the mercies of potential large waves in the credit markets. Those vulnerable smaller businesses could be important links in larger firms' supply chains. And a lock-up even to very-short-term financing on the part of apparently solid firms—like the freezing of the commercial paper market in the 2007-2008 crisis—could extend the damage of a meltdown much further into the ranks of the reputedly invulnerable larger businesses.

Yet another potential set of players is the credit rating agencies. The standing of the rating agencies themselves is controversial in the wake of the financial crisis of 2007-2008, in which they arguably overlooked serious risks. This puts the agencies under pressure to react more quickly in the future, which might heighten financial-market anxiety about potential sovereign risks. A prototype could be Standard & Poor's downgrade of U.S. Treasuries after the recent brush with the nation's statutory debt limit, despite the creation of an extraordinary congressional process to achieve future deficit reduction.

And then there is Europe. Problems of collective crisis decision-making within an EMU structure that was constructed on the implicit assumption that there would be no crises have left Europe's financial wounds to fester. Although many resisting member nations have legitimate concerns from their own parochial viewpoints, Europe may suffer because it has failed for so long to face up to and divide the admittedly enormous costs of solving the crisis.

Elsewhere, the authority to price oil gives OPEC a role strangely analogous to that of the ratings agencies. An OPEC decision that the dollar no longer serves its purpose as a reliable medium of exchange could prompt other nations to shift their reserves into other currencies, weakening the reserve status of the dollar. Such a decision could destabilize the world financial markets.

To this moment, most parties, in the United States and around the world, are behaving much as did the princes of Europe in the last century: as though it is pre-

MINARIK

ordained that this story will have a happy ending. The political parties in the United States, and the nations in the EMU, are driving hard bargains through an apparent conviction that all must be well in the end. But a happy ending is not guaranteed. The world can find itself the victim of one or more Catch-22 dilemmas. The United States easily could find itself with an exceedingly weak economy and too much debt to respond to it. The United States would be like the dysfunctional smaller indebted countries on which developed nations have imposed painful fiscal consolidation. But in this case, it is the flywheel of the global economy that must endure an abrupt demand slowdown, with no other country nearly large enough to maintain global stability and growth.

And what will happen if, at the same time, Europe is caught on the horns of a dilemma between two unimpeachable moral principles: that poorer nations should not be called upon to bail out their richer neighbors; and that each nation in a community must sacrifice to prevent a cataclysm that could sink all of them? How will decisions be improvised within the monetary union when its set of rules provides no guidance?

* * *

Put all of the foregoing together—the potential for actions with unintended consequences, creating internal contradictions and vicious cycles—and you can see how decision-makers could stumble into a financial meltdown.

Start with a budget-process deadlock in the United States. The two political parties refuse to compromise, each believing that the American people are on their side, and that if they only stand firm until the next election, they will win a strong majority and be able to address the problem “our way.” An election is always near, with a two-year Congressional cycle, and political leaders are reflexively optimistic—the prospects are based on their own performance, which they naturally believe is correct—at least until the very last days before an election, when the losers begin to see the handwriting on the wall.

Think of the pre-election deadlock in policymaking. Presidential candidates make competing promises to solve the budget crisis without pain. Candidates rule out significant tax increases and painful benefit cuts. Now, from outside of domestic politics, comes a flow of adverse events. The markets could conclude that neither party has retained the flexibility needed to address the budget crisis in the following four-year term. If market players conclude that they cannot wait that long for action, they could begin to lose confidence. Another scenario that might test confidence would be if an election that was expected to anoint one party to take decisive action instead results in divided government and likely continued gridlock.

Suppose that some development—whether started by politics, the beginnings of an economic recovery, signs of inflation, or a decline of the dollar—sends U.S. interest rates up from their current record lows. The cost of servicing the federal government's debt begins to rise. OPEC makes a gesture or a concrete step away from the primacy of the dollar as a pricing denominator. Every credit rating agency, trying to safeguard its own reputation in the aftermath of the crisis of 2007-2008, does not want to be the last to recognize publicly the growing risk in Treasuries. Actions by OPEC and the ratings agencies heighten the initial anxiety.

Developments in Europe accelerate the hike in U.S. interest rates. Ironically, that could happen in opposite ways. Resolution of Europe's debt crisis could send investors around the world from the dollar to the euro.

Or, on the other hand, a deepening of the European crisis could raise fears about the soundness even of U.S. financial institutions, and thereby raise the risk premia in interest rates. Such adverse developments in Europe could for a time enhance the safe-haven status of dollar investments. However, because they would weaken the dollar's fundamentals, that apparent favorable development could be only temporary.

And so in due time, U.S. public finances are caught in a vicious cycle. Rising interest rates raise the federal government's debt-service cost, which increases the risk premia on Treasury interest rates, which raises debt-service costs still further. Higher interest rates extend to private borrowing costs, which slows economic activity, which increases the federal government's budget deficit. In another Catch-22 contradiction, the drop in economic activity is not cushioned by a fall in interest rates to match the fall in the demand for credit. Rather, the fall in activity triggers a massive growth of fear of default risk, and so interest rates rise rather than fall, accelerating the vicious cycle. Perhaps this crossing over in the effects on interest rates would constitute a true "tipping point."

It would seem reasonable to expect that investors would respond to such signs of internal contradiction in the markets with a "rush for the exits" on Treasury securities. But because a collapse of the financial bedrock of Treasuries would reach into an almost incalculable range of other assets and financial institutions, this result could become utter panic. So just as in the 2007-2008 crisis, we would see emergency overnight meetings of business, finance and government seeking to ward off dire developments at the moment of the next market opening.

Minute-by-minute movements in the financial markets could invade the real economy over a time span of weeks and months. Business failures could start from the bottom of the firm-size continuum and roll upward. Smaller businesses financed with variable-rate loans could see their debt-service costs rise to beyond their cash flows and be forced to shut their doors, or at least reduce sharply

employment and proprietors' incomes. This would not only cut consumer demand, but also disrupt the supply chains of larger firms. A mass of smaller dominoes could begin to topple or at least hobble apparently invulnerable larger ones. Larger firms might need to rush to consolidate with and shore up their smaller business partners, a task that would be difficult to execute and could arouse anti-trust assaults. A nation that flirted with double-digit unemployment in the wake of the 2007-2008 crisis should not consider itself immune to a labor market that is far worse.

If Europe escapes its own current debt crisis, it would suffer collateral damage as the shrapnel of a U.S.-centered meltdown sprays around the world. The failure of U.S. financial institutions weakens institutions elsewhere, and other economies must absorb the indirect shock. The apparent safe-haven status of the dollar provides a layer of protection from a run on our currency. But once that layer begins to crack because of growing fear of default risk, the mass of dollar-denominated securities held in reserve merely extends the downside. Relative to a hypothetical similar nation whose currency was not the world's reserve, there are more investors in U.S. dollars, of whom only a few are needed to trigger a panicked rush for the exits, from which there would be more dollars whose full weight would fall onto the international currency and asset markets and pressure U.S. financial institutions, including the Treasury itself. It could give sad confirmation of the adage that "the bigger they are, the harder they fall."

On the other hand, if Europe's debt morass deepens and the aversion to sovereigns extends to their securities and the euro, then damage from the initial explosion itself will be felt on both sides of the Atlantic, spreading even wider cracks in an expanding web.

But the essential difference between prospects today and recent past (and smaller) financial crises lies in the role of the United States. In financial tremors since the Great Depression, the United States served as an unquestioned safe haven. It was bedrock to the financial world and a flywheel for the global economy, providing gyroscopic stability. Now, the United States is at or near the epicenter of a potential financial shock. If it is not the prime mover of that shock, it would be only because Europe has become even more unstable. Every other economy around the world is significantly short of the stature of the United States as a potential safe haven. Japan has financed its own debt, but that debt is excessive. China's financial institutions are in no position to take the global lead. At no time in living memory has the world's perceived safe haven, the issuer of the reserve currency, been a leading or primary cause of a global financial crisis. This chilling reality is the reason why economists now begin to ask about the nature of a financial meltdown.

And if conditions deteriorate along the lines of our scenario, financial actors will be truly at sea—and off the existing charts. There will be no safe haven—with

only the most active and sophisticated investors in a sense bartering outside of the existing currency system, hot-potato style, with precious metals and other commodities. Instead of searching relatively thoughtfully for the highest return, financial actors will be rushing frantically for any measure of stability and safety, often in unproductive assets. This measure of panic may to some extent drive investors to explore productive opportunities in the developing economies, outside of the current orbit of sovereign risk, but because those economies disproportionately exploit export opportunities in the now-disrupted developed world, they too will be weakened. Such an unprecedented scenario brings to mind the largest one-day percentage drop in the U.S. stock market (almost 23 percent, part of a drop of more than one third in four months, with volume double the previous record). “Black Friday,” October 19, 1987, was ascribed by some commentators to fear of excessive U.S. reliance on foreign capital—much the same condition as is exacerbated by our fiscal imbalance today. In 1987, the economy was growing comparatively robustly. Given the recent financial crisis, the persistent economic slowdown, and the continuing issues in Europe, it is hard to consider that catastrophe as an upper bound on the potential damage today.

In a situation like this, respect for and credibility of government and the Federal Reserve will be critical. However, this disrupted environment will only pull further at the cracks in the foundations of those institutions, which already were opened wide by the calamity of the 2007-2008 financial crisis. Far-from-expert political actors will prey on that lack of respect, to the detriment of both policymaking itself and the efficacy of even the wisest decisions in an environment of profound uncertainty and even panic.

To this moment, public dialogue in government has been mainly destructive rather than constructive. There are many thoughtful members of Congress, in both parties, who communicate continuously and privately across the political aisle, and who earnestly seek responsible compromise to slow the buildup of debt. However, the loudest voices come from the political extremes, who reach office in gerrymandered districts dominated by the ideological wings, financed by a campaign-contribution system that is awash in undisclosed individual and corporate money. Every honest misstatement and misstep is broadcast for political advantage, poisoning the electoral environment and making pursuit of the public good an almost unforgivable offense. Too many in the public are caught up in partisan frenzy rather than in supporting advocates of nuanced solutions to our complex problems. In this political atmosphere, our elected policymakers may be too slow to appreciate the danger of a developing meltdown and to show cooperation in addressing the fundamental problems and thereby to calm the public.

MINARIK

Amidst such short-term anxiety and even panic, fostering long-term economic growth will fall far down the to-do lists of governments. But ballooning debt-service costs clearly will crowd out much of both private business investment and potentially productive public investment in both physical infrastructure and human capital. So in another Catch-22-style contradiction, governments will not be able to pursue what they will need the most to save their nations' futures. Private investment will be further constrained because lending by and among stressed financial institutions will lock up, from fear of unknown and unknowable default risks.

* * *

A U.S. financial meltdown today is eminently avoidable. The wealthiest nation on earth, despite a painful economic slowdown, maintains the wherewithal to pay its bills. The open question is whether it maintains the will and the wisdom.

The purpose of this rhetorical foray beyond our charts of fiscal policy and finance cannot be to make an accurate prediction. Rather, it must be to ensure that no prediction of the nature of a financial meltdown will ever be tested. The objective is to bring the sovereign princes, as it were, to their senses before they blunder and dare their way into an irresolvable Catch-22 of unthinkable financial contingencies.

References

- Congressional Budget Office.** 2007. *The Long-Term Budget Outlook*, eds. Christine Bogusz and Leah Mazade. Supplemental Data. Washington, D.C.: Congressional Budget Office. [Link](#)
- Congressional Budget Office.** 2011. *CBO's 2011 Long-Term Budget Outlook*, eds. Christine Bogusz, et al. Supplemental Data. Washington, D.C.: Congressional Budget Office. [Link](#)
- Office of Management and Budget.** 2011. *Historical Tables, Budget of the United States Government, Fiscal Year 2012*. Washington, D.C.: U.S. Government Printing Office. [Link](#)
- Organisation for Economic Co-operation and Development.** 2011. *OECD Economic Outlook, Volume 2011 Issue 2*. Statistical Annex. Paris: OECD Publishing. [Link](#)

About the Author



Joseph J. Minarik is Senior Vice President and Director of Research at the Committee for Economic Development. From 1981 to 1986, Dr. Minarik worked closely with Members of Congress, especially Senator Bill Bradley, on federal income-tax reform. In 1993, Dr. Minarik became Associate Director for Economic Policy at the White House Office of Management and Budget, working on the formulation and adoption of President Bill Clinton's 1993 economic program and the bipartisan balanced-budget agreement of 1997. Dr. Minarik received his B.A. in economics from Georgetown University in 1971, and he holds three graduate degrees in economics from Yale University, earning his Ph.D. in 1974. His email is Joe.Minarik@CED.org.

[Go to archive of Watchpad section](#)

[Go to January 2012 issue](#)

[Go to Mercatus Center symposium presentation page](#)



Discuss this article at JournalTalk:
<http://journaltalk.net/articles/5755>



EJW

ECON JOURNAL WATCH
Scholarly Comments on
Academic Economics

ECON JOURNAL WATCH 9(1)
January 2012: 71-77

EJW-MERCATUS SYMPOSIUM
U.S. SOVEREIGN DEBT CRISIS:
TIPPING-POINT SCENARIOS AND CRASH DYNAMICS

How and Why a U.S. Sovereign Debt Crisis Could Occur

Peter J. Wallison¹

[LINK TO ABSTRACT](#)

The purpose of this paper is not to predict whether the U.S. *will* face a sovereign debt crisis, but only to outline what is the *most likely* way that such a catastrophic event might occur. Although there are many possible ways that the U.S. could suffer a sovereign debt crisis—a collapse of the Euro, a pandemic of some kind, or an earthquake in California come to mind—these events are either hard to connect directly to a U.S. debt crisis or are highly unlikely to occur. For that reason, this paper will focus on what I believe is the most likely source of a debt crisis: the failure of the U.S. political system—how it might occur, how the U.S. government and public will react, and what steps will ultimately be taken to address it.

Before proceeding, there is one important issue to consider. In a true sovereign debt crisis, a country cannot meet its debt obligations, largely because it does not have enough of the currency in which its debt is denominated. This, for example, is Greece's problem today. That is very unlikely to happen to the U.S., for the simple reason that its debt is denominated in its national currency, the dollar, and if more dollars are needed to meet the country's contracted debt they can simply be printed by the Federal Reserve. In extreme conditions, the U.S. may be compelled to denominate its debt in some other currency, perhaps the Euro or the Chinese Yuan, but this would imply a huge change in the position of the U.S.

1. American Enterprise Institute, Washington, DC 20036.

in the world, and—given the far weaker positions of Europe and China—it is hard to imagine that this could happen in the foreseeable future. Well before that, as discussed below, there would be an upheaval in the U.S. political system—caused by the failure to control its outstanding debt—that will set the country on a course to address the debt problem. Accordingly, this paper will consider not an actual default on U.S. debt, but a serious loss of creditor confidence in the ability of the U.S. to meet its debt obligations without inflating its currency.

A Simplified Description of the American Polity

The U.S. constitutional system consists of two political branches, an executive and a legislative, and a non-political and independent judicial branch. The legislative branch is divided into a House of Representatives, representing the citizens by population, and a Senate, representing the citizens by their states of residence. There is no requirement that the executive and legislative branches be controlled by the same party and it often occurs that they are divided between the two parties, with one party holding the presidency and another with majorities in one or both of the legislative bodies. In that case, it can be politically difficult to achieve a consensus on action, because one of the branches or bodies will not go along.

The U.S. has only two main political parties—the Democrats and the Republicans—and today they are sharply divided along philosophical or ideological lines. Each has a strong support base in the population, which is sharply divided along the same lines. The Republicans generally believe in smaller government, less-regulated markets, low taxation, free trade and a freer rein for business. They expect that such policies will stimulate supply-side responses that will increase government revenues, reduce deficits, and strengthen economic growth. Democrats generally believe in a strong government safety net, government assistance for important or promising industries and disadvantaged groups, and a more steeply progressive tax system that will mitigate what they believe to be sharp income inequality in the country. They expect that higher spending and higher taxes will stimulate demand, keep deficits in check, and result in strong economic growth.

The political parties can each claim the support of about one-third of the population. The remaining third consists of independents, who belong to neither party but shift between the parties in somewhat unpredictable ways, aligning sometimes with the Republicans and sometimes with the Democrats. The

independents are like a shifting cargo in a ship's hold, moving this way and that as the ship of state makes its way through heavy seas. In 2006 and 2008, they liked the Democrats; in 2010 they liked the Republicans. Until independents settle on a direction for the country, its fiscal course will be unpredictable. Yet the independents are the least interested group in setting a course for the future. They simply want the parties to agree and get on with it. What looks like party bickering to the independents is serious business to the parties' respective bases.

I outline this very simplified view of the American polity in the early 21st century to underscore that there is very little basis for compromise between the parties, and little indication that independents are capable of or interested in determining what direction the country should take over the long term. As long as the government and the electorate are divided in this way, changes in the country's overall fiscal direction will be extremely difficult to achieve.

A Scenario for Crisis: Divided Government after 2012

Unless the government takes active steps to make substantial reforms, the current course is likely to lead to a political crisis. This is shown by the projections included in the Congressional Budget Office's August 2011 update of its *Budget and Economic Outlook*. In that analysis, made after the August agreement to avert the debt ceiling, CBO projected that if current *law* is followed the annual deficits between 2011 and 2021 will average about 1.8% of GDP and the debt in 2021 will be about 61% of GDP—about where it is now. But if current *policies* are followed, the average deficits over the same period will be 4.3% of GDP, and the debt in 2021 will be \$8.5 trillion greater in 2021 than it is today, constituting 82% of GDP (Congressional Budget Office 2011b).

Current *policies* include no change in either the laws or policies applicable to the major entitlements—that is, outlays under Social Security, Medicare, and Medicaid. These will continue to grow as required by current law. The entitlements are by far the most important drivers of government spending and obligations. Although CBO did not include entitlement growth projections in its August 2011 updating report, it has done such projections in the past.

Current policies also include the continuation of the so-called Bush tax cuts for all taxpayers, continued deferral of the alternate minimum tax (AMT), and continued deferral of the cuts in physician reimbursements under Medicare (the so-called Doc Fix). If the government is divided, none of the changes will be allowed to go into effect. And even with undivided government, changes are not

guaranteed: The Democrats had complete control of the government after 2008 and still did not repeal the Bush tax cuts, allow the AMT to go into effect, or cut Medicare reimbursements. All of these actions would be perceived by many to be costly to the middle class and thus are politically unpalatable for either party.

The scenario I envision for a U.S. sovereign debt crisis runs as follows: Neither the Democratic nor the Republican Party is able to gain complete control of the U.S. government in any election for the indefinite future. Control of the House of Representatives, the Senate and the presidency remains split, with at least one House of Congress in control of a party other than that of the president. Each party would then be in a position to prevent the government from stopping the growth in the country's debt. As a result, there is an indefinite period of electoral stand-off between the parties on how to reduce or stop the growth of spending, especially on the promises to the public concerning various popular government benefits, known as entitlements—Social Security, Medicare and Medicaid.

Although a compromise is possible in theory, I suggest that, *in the absence of a crisis*, the electoral benefits that flow to each party by attacking the positions of the other will make compromise unlikely. For example, when the Republicans in the House adopted a budget that included a new system for controlling the costs of Medicare, the Democrats saw this as a path back to a House majority, not as something to build on for the control of the country's growing debt. This isn't to say that a compromise will not happen before a crisis occurs; strong presidential leadership could bring the country together behind a debt solution before a crisis, but I assess this as less likely than a continuation of the gridlock that exists today.

In its *Long-Term Budget Outlook* of June 2011, before the agreements made in August to avert the debt limit, CBO estimated that if current policies are continued the cost of the government's total spending by 2021 would be 26% of GDP, and at that point the total debt would be 101% of GDP. On the same assumptions, by 2041, total spending would be 37% of GDP and the U.S. debt would exceed 200% of GDP. Taking account of CBO's estimates and projections based on the spending cuts made by the August 2011 agreement, the debt-to-GDP ratio in 2021 will be 82%. According to CBO, the cumulative entitlement costs for the 20-year period 2022-2041 will total \$78 trillion (Congressional Budget Office 2011a).

There is of course no way to know whether a debt-to-GDP ratio of 82% (estimated by CBO for 2021 after the August agreements) will be the tipping point that would put the U.S. on a path to a sovereign debt crisis, or whether some other (higher or lower) percentage will be necessary to put the U.S. at the brink. Perhaps that tipping point has already passed. Everyone would agree, however, that as the U.S. budget deficits grow after 2011, and as spending driven by entitlement costs becomes a higher and higher percentage of GDP, the U.S. is on an unsustainable path.

At some point—we don't know when—the financial markets will come to the conclusion that there is no way for the U.S. to meet its contracted debt obligations (the debt issued by the Treasury), as well as its promises to the American people in the entitlements programs, without inflating the currency—i.e., reducing the purchasing power of the dollar in terms of the goods it will buy.

The capital market's realization that the U.S. cannot meet its obligations without inflation could be dramatic—signified, for example, by a sharply higher interest rate at a Treasury auction of its ten year notes. Alternatively, the rate on government securities or wholesale prices could gradually creep up over a period of months until a trend becomes indisputably clear. At that point, which could be next year, 10 years from now, or even later, a form of U.S. debt crisis will ensue. For the reasons outlined above, this will not be an actual default but rather a period of devastating inflation that will have the following effects:

- The dollar will fall in relation to other currencies. Foreign goods, therefore, will become more expensive for Americans, reducing the relatively high standard of living obtained by importing low-priced products from emerging markets.
- Interest on newly issued Treasury debt will rise substantially, adding significantly to the budget deficit and the need for yet more borrowing.
- An upward price-wage spiral will begin, with workers demanding higher compensation to make up for the falling purchasing power of their wages.
- Prices of commodities such as oil, food and gold will also increase as producers also try to maintain the purchasing power of their inflating dollars.
- Prices of tangible assets of all kinds—land, gold, diamonds, art—will rise faster than the price level generally as individuals and businesses try to hedge against inflation by acquiring real assets that will inflate in value.
- Social Security recipients and other entitlement beneficiaries whose benefits are tied to inflation will receive higher benefits, again increasing outlays.
- Physicians will demand higher allocations of funds from Medicare in order to treat Medicare patients, and in the absence of such increases Medicare patients will be turned away by doctors in what will be called a doctors' strike.
- As inflation accelerates, rising dollar incomes will result in substantially higher taxes as a percentage of income, as more and more middle

income earners encounter the progressivity of tax system at higher dollar incomes.

- Higher costs of consumption will come immediately, but wages will lag, causing a sharp downturn in demand. The U.S. will enter a deep recession, perhaps a depression, with unemployment rising to levels not seen since the 1930s.
- Investment returns on such things as bank deposits and payments from public and private pension programs—including Social Security—will lag far behind prices, causing great privation for those on fixed incomes. At some point, foreign producers of commodities may refuse to accept dollars in payment for goods or services. If there is no alternative, they may demand gold, silver or a stronger currency (perhaps the Chinese Yuan or the Euro if it survives the current turmoil in Europe) as a medium of exchange. If there is no stronger currency, the world's trading system will stagnate, with associated declines in the standard of living for people everywhere.

Politics in the Crisis

These momentous events will make clear that the U.S. must choose between meeting its contracted debt obligations with a stable dollar or fulfilling the political promises implied by the entitlement system. It cannot do both. Just as many U.S. states and localities have begun to pull back from—or attempt to reduce—their future pension obligations, the federal government will finally be required to confront the same issue. The parties will have different approaches to addressing this reality, consistent with their ideological positions. The Republicans will want to increase economic growth by cutting taxes and to strengthen the dollar by cutting entitlement spending; the Democrats will want to increase taxes so as to fulfill the promises of the social programs as nearly as possible.

What will the independents do? It is conceivable that they would split in a way that prolongs divided government, but, following my cargo analogy, I will posit that, in a real crisis, they swing decisively to one party or the other.

If that party is the Democrats, the country will turn sharply left. Taxes will be increased to meet social policy obligations including the entitlements, which will not be seriously cut. Military spending will also be cut. Regulation will increase, and large portions of the economy that have been weakened by the recession may be nationalized or otherwise brought under political control. This will also increase government revenues. If the party that is given the mandate is the Republicans, the country will turn sharply right. The Republicans will cut taxes, keep military

spending largely where it was, and cut back sharply on entitlement spending by raising the age of eligibility, reducing payments to those already eligible, and changing the structure of Medicare so that it is no longer a single-payer system.

Accordingly, unless the U.S. political system can get control of entitlement spending before the trigger event occurs, the question that will ultimately be presented to the voters is whether they want to pay the government's contracted debt by increasing taxes or by cutting entitlements. It will eventually become clear that both cannot be done without substantial and painful inflation.

References

- Congressional Budget Office.** 2011a. *CBO's 2011 Long-Term Budget Outlook*, eds. Christine Bogusz, et al. Washington, D.C.: Congressional Budget Office. [Link](#)
- Congressional Budget Office.** 2011b. *The Budget and Economic Outlook: An Update*, eds. Christian Howlett, et al. Washington, D.C.: Congressional Budget Office. [Link](#)

About the Author



Peter J. Wallison holds the Arthur F. Burns Chair in Financial Policy Studies at the American Enterprise Institute. From June 1981 to January 1985, he was General Counsel of the United States Treasury Department, where he had a significant role in the development of the Reagan Administration's proposals for deregulation in the financial services industry. During 1986 and 1987, Mr. Wallison was White House counsel to President Ronald Reagan. He was a member of the Financial Crisis

Inquiry Commission, established in 2009, and dissented from the Commission's majority report. His email is PWallison@AEI.org.

[Go to archive of Watchpad section](#)

[Go to January 2012 issue](#)

[Go to Mercatus Center symposium presentation page](#)



Discuss this article at Journaltalk:
<http://journaltalk.net/articles/5756>