

Standard & Poor's downgraded the credit rating of long-term U.S. sovereign debt from a stellar AAA to AA+ based on "political risks and rising debt burden" with a negative outlook as of Friday, August 5.¹ This represents the first time that one of the three major credit rating agencies has downgraded U.S. sovereign debt since such ratings were initiated.

This action ostensibly has the potential to detract from the marketability of, and increase the costs associated with, U.S. sovereign debt in the future. In particular, we must be sensitive regarding the perceptions of overseas investors to this announcement, noting that foreign investors now hold approximately 50% of U.S. sovereign marketable debt.

Finally, we believe that this action underscores the utility of CME Group Treasury futures and options on futures products as risk-management tools in an uncertain economic environment.

S&P Announcement – On August 5, S&P announced that it had "lowered ... [its] ... long-term sovereign credit rating on the United States of America to 'AA+' from 'AAA' and affirmed the 'A-1+' short-term rating ... [t]he downgrade reflects ... [its] ... opinion that the fiscal consolidation plan that Congress and the Administration recently agreed to falls short of what, in our view, would be necessary to stabilize the government's medium-term debt dynamics."²

This action is taken as a reaction to the recent acrimonious partisan debate over the increase in the U.S. debt ceiling. This issue resulted in what has been described by many analysts as a game of political brinkmanship featuring Republicans and Democrats forwarding their own spending and taxation agendas.

The political debate was, at least temporarily, resolved on Tuesday, August 2, when President Barack Obama signed legislation that called for a \$2.4 trillion increase in the U.S. statutory debt ceiling, in two stages, from the previous level of \$14.3 trillion. This legislation further called for some \$2.2 trillion in spending cuts over the next 10 years.

While the legislation averted the immediate prospect of a default of the Federal government with respect to its marketable debt or account debts, it failed to

resolve the growing fiscal crisis. Further, it did not resolve the fundamental debate over the size and scope of government between Democrats and Republicans. The Democrats called for revenue raising measures while the Republicans, emboldened by the growing popularity of the Tea Party movement, held firm that tax increases were not to be part of the compromise measure.

As a result, S&P has adopted the "view that the effectiveness, stability and predictability of American policymaking and political institutions have weakened at a time of ongoing fiscal and economic challenges to a degree more than we envisioned when we assigned a negative outlook to the rating on April 18, 2011. Since then, we have changed our view of the difficulties in bridging the gulf between the political parties over fiscal policy, which makes us pessimistic about the capacity of Congress and the Administration to be able to leverage their agreement this week into a broader fiscal consolidation plan that stabilizes the government's debt dynamics any time soon."³

Looking forward, S&P is discouraged by the fiscal projections offered by the Congressional Budget Office and other analysts. As a result, "[t]he outlook on the long-term rating is negative. We could lower the long-term rating to 'AA' within the next two years if we see that less reduction in spending that agreed to, higher interest rates, or new fiscal pressures during the period result in a higher general government debt trajectory than we currently assume in our base case."⁴

Debt Ceiling – The legislation passed August 2 raises the Federal debt ceiling to some \$16.7 trillion. But what does this mean and why do we have a debt ceiling?

To begin, let's distinguish between various types of government indebtedness. "Debt held by the public" is created when the government explicitly sells debt, often in the form of securities. "Debt held by government accounts" represents financial obligations as a result of programs such as Social Security, Medicare, etc. Total or gross public debt is the aggregation of debt held by the public plus debt held by public accounts.

The U.S. Congress passed the Second Liberty Bond Act in 1917 which mandated use of long-term "Liberty Bonds" to finance defense spending during World War I. Prior to that point, U.S. indebtedness

¹ Standard & Poor's Global Credit Portal Ratings Direct, "Research Update: United States of America Long-Term Rating Lowered to 'AA+' On Political Risks and Rising Debt Burden; Outlook Negative" (August 5, 2011).

² *Ibid.*

³ *Ibid.*

⁴ *Ibid.*

was generally of a short-term nature with the exception of loans authorized to finance specific projects, e.g., construction of the Panama Canal. The 1917 Act further instituted a limit on total federal debt.

The general intent was to make Congress responsible for managing the debt in an effort to keep interest costs low. Normally when a nation's legislative body approves spending, the means to raise necessary funds are implied. But the 1917 Act made the U.S. one of the few nations to enforce a debt limit apart from its appropriations process. Subsequent amendments to the legislation allowed Congress to establish separate limits on different categories of debt, e.g., bills, notes, bonds.

U.S. Debt Subject to Statutory Limit (Billions USD)

	Debt Limit	Debt Subject to Limit	% of Debt to Limit
Sep-96	\$5,500.0	\$5,137.2	93.4%
Sep-97	\$5,950.0	\$5,327.6	89.5%
Sep-98	\$5,950.0	\$5,439.4	91.4%
Sep-99	\$5,950.0	\$5,567.7	93.6%
Sep-00	\$5,950.0	\$5,591.6	94.0%
Sep-01	\$5,950.0	\$5,732.8	96.3%
Sep-02	\$6,400.0	\$6,161.4	96.3%
Sep-03	\$7,384.0	\$6,737.6	91.2%
Sep-04	\$7,384.0	\$7,333.4	99.3%
Sep-05	\$8,184.0	\$7,871.0	96.2%
Sep-06	\$8,965.0	\$8,420.3	93.9%
Sep-07	\$9,815.0	\$8,921.3	90.9%
Sep-08	\$10,615.0	\$9,959.9	93.8%
Sep-09	\$12,104.0	\$11,853.4	97.9%
Sep-10	\$14,294.0	\$13,510.8	94.5%
Mar-11	\$14,294.0	\$14,217.9	99.5%

Source: Treasury Bulletin, Table FD-6

In 1939, Congress repealed those separate limits on different debt categories, providing the Treasury Department with far greater flexibility to issue debt instruments with maturities that offered lower rates. However, the debt limit was maintained at a level that was much closer to the total Federal debt levels. Consider that in 1919, the limit was at \$43 billion while total federal debt stood at \$25.5 billion. By 1938, the limit was pegged at \$45 billion and relatively close to the \$40.4 billion in total Federal debt.

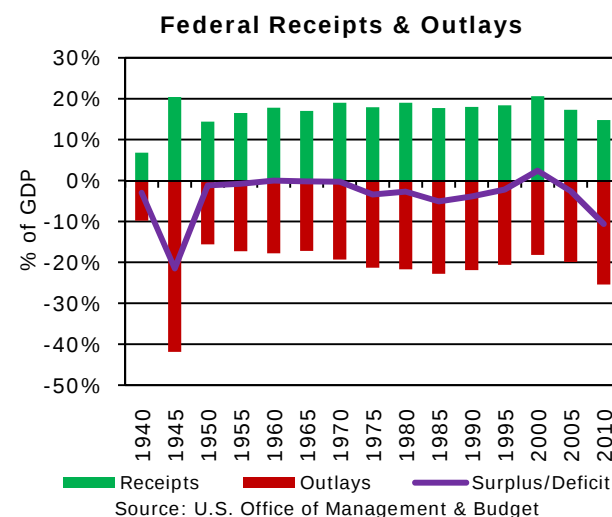
The debt limit has been increased many times in the intervening years. It ballooned to \$300 billion by 1945 as a result of massive spending during World War II. Between 1997 and 2001, the Federal

budget actually ran at a surplus and, as a result, the limit held at \$5.95 trillion for an extended period.

Since then, however, Federal spending has generally increased while tax receipts have generally declined. This has resulted in a spate of rancorous debate in Congress over fiscal policy, often tied to the debt ceiling as a focal point of the debate. "Close calls" were experienced in most every fiscal year beginning in 2002. But the debt ceiling crisis culminating in the August 2 legislation was possibly the most serious of these episodes as evidenced by S&P's downgrade.

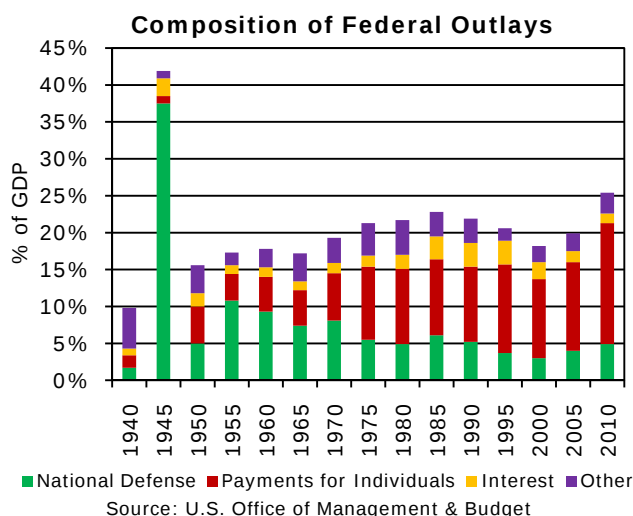
Philosophical Clash – The debate over the debt ceiling was about far more than the debt limit. Rather, it was symptomatic of a fundamental clash over the future size and role of the federal government. While both Democrats and Republicans generally endorse the ideal of a balanced budget, Republicans generally favor holding tax rates to current levels while their Democratic counterparts generally favor increasing revenues through taxation.

The debate was, of course, occasioned by the fact that government spending has ballooned while tax receipts have declined in the wake of the subprime mortgage crisis. Thus, the 2010 deficit is estimated at 10.6% of GDP. This represents a complete reversal of the situation in 2000 when the U.S. was operating at a modest surplus of 2.4% of GDP. Of course, the current deficits are not nearly as frightening as the 21.5% of GDP deficit reached in 1945 during World War II.



The composition of Federal spending has changed dramatically over the years. Defense spending had

been the largest budgetary line item during the post WWII period up until the early 1970s. But defense spending now takes a back seat to payments to individuals notably including entitlement programs such as Social Security, Medicare and Medicaid. These obligations continue to grow in magnitude and now account for over 15% of annual GDP.



Fiscal Scenarios – The long-term implications of failure to address the burgeoning Federal fiscal crisis bear close examination. In particular, recent analyses offered by the Congressional Budget Office (CBO) warn of impending risks and fiscal crisis.⁵ The 2011 CBO study offers two alternate budgetary scenarios as follows.

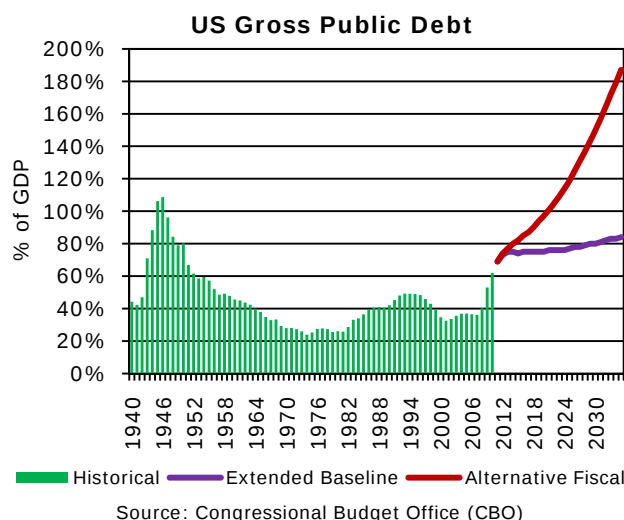
- **Extended-Baseline Scenario** – This scenario assumes that the budget situation moving forward adheres closely to current law. Thus, “the expiration of the tax cuts enacted in 2001, the growing reach of the alternative minimum tax, the tax provisions of the recent health care legislation, and the way in which the tax system interacts with economic growth would result in steadily higher revenues.” Revenues are projected at 23% of GDP by 2035.

On the other hand, “spending on everything other than the major mandatory health care programs, Social Security, and interest on federal debt – activities such as national defense and a wide variety of domestic programs – would decline to the lowest percentage of GDP since before World War II.”

⁵ See “CBO’s 2011 Long-Term Budget Outlook,” Congressional Budget Office (June 2011) and “Federal Debt and the Risk of a Fiscal Crisis,” Congressional Budget Office (July 27, 2010).

This scenario has public debt increasing to 75% of GDP by 2020 and 84% of GDP by 2035.

- **Alternative Fiscal Scenario** – This “bleaker” outlook “incorporates several changes to current law that are widely expected to occur ... most important are the assumptions about revenues that the tax cuts enacted since 2001 and extended most recently in 2010 will be extended: that the reach of the alternative minimum tax will be restrained ... and that over the longer run, tax law will evolve further so that revenues remain near their historical average of 18 percent of GDP.”



On the spending side of the ledger, “this scenario also incorporates assumptions that Medicare’s payment rates for physicians will remain at current levels ... and that some policies enacted in the March 2010 health care spending will not continue in effect after 2021 ... spending on activities other than the major mandatory health care programs, Social Security, and interest on the debt will not fall quite a low as under the extended-baseline scenario, although it will still fall.”

Per this more dire of the CBO’s projections, the public debt would reach 97% of GDP by the year 2020 and 187% of GDP by the year 2035.

There are no absolute prescriptions regarding how much public debt a nation may, as a practical matter, carry. To put these results into perspective, however, consider that the Maastricht Treaty had provided guidelines regarding national economic policies as a prerequisite for nations joining the Euro-zone and adopting the Euro as its common currency. Amongst other requirements, the Treaty calls for total sovereign debt to be less than 60% of

GDP and the annual government budget deficit to be less than 3% of GDP.

Under either CBO scenario, the U.S. public debt as a % of GDP would exceed the Maastricht prescription by a wide margin. Note that the 2010 budget deficit of 10.6% of GDP already exceeds the Maastricht 3% prescription. All of this would place the fiscal situation in the U.S. on par or worse than the European nations (including Greece, Ireland, Portugal, Spain, and Italy) which are at the center of the ongoing European sovereign debt crisis.⁶

2009 Public Debt as % of GDP

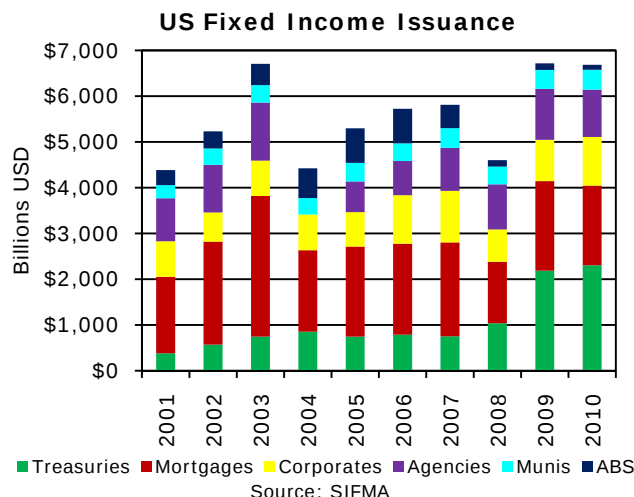
World Rank ¹	Country	Public Debt as % of GDP
1	Japan	150.7%
5	Greece	144.0%
8	Italy	118.1%
11	Ireland	94.2%
14	France	83.5%
15	Portugal	83.2%
19	Germany	78.8%
23	United Kingdom	76.5%
24	Austria	70.4%
27	Spain	63.4%
31	Brazil	60.8%
35	World	59.3%
37	United States	58.9%
45	India	55.9%
55	Norway	47.7%
79	Switzerland	38.2%
108	Australia	22.4%
113	China	17.5%
123	Russia	9.5%

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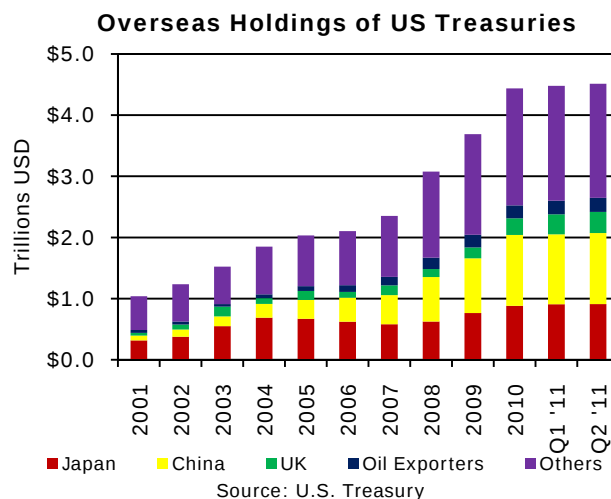
Source: CIA World Factbook & International Monetary Fund
¹ World rank on basis of public debt as % of GDP

Impact on Markets – This situation has already exerted a toll on the markets, noting the negative reaction of the equity markets on August 8 with the S&P 500 closing at 1,119.46 and volatility as measured by the VIX up to 48%. West Texas Intermediate (WTI) crude oil fell to \$81.04/barrel on August 8. Gold prices, on the other hand, surged up to \$1,720.80/ounce on August 8 as the metal is viewed as a store of monetary value.

⁶ There remains a major distinction between the fiscal situations in the U.S. and these peripheral European countries. Specifically, The U.S. has not subordinated its policies to the European Central Bank (ECB) as have Euro-zone nations. Thus, the U.S. controls its own fiscal and monetary policies.



Finally, we have witnessed a rally in the price of U.S. Treasuries with 10-year on-the-run yields falling to a yield of 2.32% as of August 8th. Paradoxically, Treasuries continue to be viewed as a safe haven of sorts. This result may be somewhat counter-intuitive to the extent that Treasuries are the subject of S&P's downgrade. However, the real risk of default is viewed as insignificant. Further, Treasuries have been issued in large quantities and are exceedingly liquid. Note that annual Treasury issuance grew to some \$2,304 billion in 2010, more than triple the \$752 billion issued in 2007.



In the longer-term, however, the Treasury's capacity to raise funds through debt sales may be, at least marginally, impacted. Certainly, investor nations such as China are publicly expressing concern, noting that China held some 12.5% of marketable U.S. debt securities as of May 2011 while Chinese equity markets reacted very negatively to the downgrade in U.S. long-term sovereign debt.

Major Foreign Holders of Marketable U.S. Debt (May 2011)

Country	Holdings (Billions)	% of Total
China	\$1,159.8	12.5%
Japan	\$912.4	9.9%
United Kingdom	\$346.5	3.7%
Oil Exporters	\$229.8	2.5%
Brazil	\$211.4	2.3%
Taiwan	\$153.4	1.7%
Caribbean Banking Centers	\$148.3	1.6%
Hong Kong	\$121.9	1.3%
Russia	\$115.2	1.2%
Switzerland	\$108.2	1.2%
Canada	\$90.7	1.0%
...		
Total Foreign	\$4,514.0	48.7%
Total	\$9,262.2	100.0%

Source: U.S. Treasury Department

As a result, Chinese authorities issued a stinging commentary through the Xinhua news agency on Saturday, August 7th, denouncing the U.S. as a "debt addict" and calling for international supervision of the U.S. dollar. To the extent that Chinese foreign reserves are largely held denominated in U.S. dollars and the Peoples Bank of China (PBC) is the U.S.'s largest creditor, "China has every right now to demand that the United States address its structural debt problems and ensure the safety of China's dollar assets."

Concluding Note – The recent debt ceiling crisis culminating in S&P's downgrade of U.S. sovereign

debt highlights the seriousness of the fiscal problems faced by the U.S. federal government.

Hard choices in terms of revenue raising and cutbacks in spending programs, possibly including the heretofore sacrosanct entitlement programs, remain on the board. Failure to address these fiscal concerns may very well result in further declines in the U.S. sovereign creditworthiness and some long-term increases in the general cost of funds.

Note that CME Group offers a full suite of Treasury based derivatives products designed to assist investors in managing the volatility associated with Treasury investments. We suggest that these products are currently more relevant than ever for investors, both domestic and abroad, in light of these ongoing fiscal challenges.

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