CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Douglas W. Elmendorf, Director

February 24, 2011

Honorable Paul Ryan
Chairman
Committee on the Budget
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

As you requested, the Congressional Budget Office (CBO) has analyzed how the three interest rate scenarios you specified would affect federal budget deficits and debt held by the public. The estimates of such deficits and debt that CBO has compiled are based on the projections presented in CBO's *The Budget and Economic Outlook: Fiscal Years 2011 Through 2021* (published in January 2011). The three interest rate scenarios (detailed in Table 1) are as follows:

1. The rate on 10-year Treasury notes issued in calendar year 2011 would average 3.8 percent (3.5 percent in fiscal year 2011), and it and all other Treasury interest rates would rise in the future to approximately their average levels over the 1991–2000 period.

2. The rate on 10-year Treasury notes issued in calendar year 2011 would average 3.8 percent (3.5 percent in fiscal year 2011), and it and all other Treasury interest rates would rise in the future to approximately their average levels over the 1981–1990 period.

3. Interest rates would follow a path that is consistent with the average of the 10 highest projections shown in the October 2010 and February 2011 releases of *Blue Chip Economic Indicators*.

For scenarios 1 and 2, CBO used the average level of 3-month and 10-year Treasury interest rates during the 1990s and 1980s, respectively, to estimate levels for the latter part of the current 10-year projection period. CBO assumed that rates would rise from their 2011 values until they reached those average levels in 2016, when, in CBO's estimation, the gap between actual output and the economy's potential output will close. CBO then held rates constant at those levels through 2021.

For scenario 3, CBO used the average rates of the 10 highest forecasts for 2011 and 2012 from the February 2011 *Blue Chip* report, and based the rates for 2013 through 2021 on the 10 highest projections in the October 2010 *Blue Chip* report (the most recent report with longer-term projections). However, CBO increased the rates for 2017 through 2021 by 0.2 percentage points because market rates have moved higher since the October *Blue Chip* report was released; rates from 2013 through 2016 were not changed because they were consistent with the higher 2017–2021 rates.

All three scenarios involve interest rates higher than those in CBO's economic forecast. For most years, the interest rates in scenarios 1 and 3 are about 1 percentage point higher than in the CBO forecast; in the latter part of the decade, the interest rates in scenario 2 are several percentage points above the CBO forecast.

Under all three scenarios, interest costs would be higher than CBO estimated in its January baseline projections (see Table 2). The effects would be minimal for 2011. Between 2012 and 2021, though, interest payments under scenarios 1 and 3 would be about $1.1 trillion and $1.2 trillion higher, respectively, and under scenario 2, interest payments would be $5.4 trillion higher. The cumulative deficit and debt held by the public at the end of the 10-year period would rise by similar amounts. A small portion of the additional interest payments would be offset in most years by larger remittances by the Federal Reserve System on its earnings from holding Treasury securities, which are shown as added revenues in Table 2. The estimates in Table 2 do not account for possible effects on the deficit and debt of other differences in economic conditions that might accompany higher interest rates.

If you wish further details, we will be pleased to provide them. The CBO staff contact is Jared Brewster, who can be reached at 226-2880.

Sincerely,

Douglas W. Elmendorf

Douglas W. Elmendorf
Director

Enclosure

cc: Honorable Chris Van Hollen
Ranking Member

Table 1.

CBO's Estimates of Treasury Interest Rates Under the Scenarios Requested by Chairman Ryan

(Percent, by fiscal year)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
					Rates on 3-Month Bills						
CBO's Baseline	0.2	0.8	2.2	3.3	3.9	4.2	4.4	4.4	4.4	4.4	4.4
Scenario 1	0.3	1.3	2.4	3.3	4.4	5.0	5.0	5.0	5.0	5.0	5.0
Scenario 2	0.3	1.6	3.5	5.6	6.7	8.2	8.9	8.9	8.9	8.9	8.9
Scenario 3	0.3	1.2	3.0	4.2	4.7	5.0	5.2	5.2	5.2	5.2	5.2
					Rates on 10-Year Notes						
CBO's Baseline	3.2	3.7	4.1	4.5	4.9	5.3	5.4	5.4	5.4	5.4	5.4
Scenario 1	3.5	4.3	4.8	5.5	6.0	6.5	6.6	6.6	6.6	6.6	6.6
Scenario 2	3.5	4.8	6.5	8.5	10.0	10.5	10.5	10.5	10.5	10.5	10.5
Scenario 3	3.5	4.6	5.6	5.9	6.0	6.0	6.2	6.2	6.2	6.2	6.2

Source: Congressional Budget Office.

Note: Scenarios 1, 2, and 3 were specified by Chairman Ryan as alternatives to CBO's baseline projections. Scenario 1 approximates the average rates witnessed from 1991 through 2000; scenario 2 approximates the average rates that occurred between 1981 and 1990; and scenario 3 approximates the average rates under the 10 highest interest rate projections in the *Blue Chip* economic forecasts of October 2010 and February 2011.

Table 2.

Effect of Interest Rate Scenarios Requested by Chairman Ryan Relative to CBO's January 2011 Baseline

(Billions of dollars, by fiscal year)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total, 2012-2016	Total, 2012-2021
Scenario 1: Interest Rates Similar to Rates That Occurred Between 1991 and 2000													
Effect on the Deficit													
Revenues	*	*	5	7	4	5	7	8	9	10	11	22	66
Interest													
Rate effect	2	20	33	40	61	86	105	120	133	146	156	239	899
Debt service	*	*	1	3	7	12	19	28	38	49	62	24	221
Subtotal, interest	2	20	34	43	67	98	125	148	171	195	219	263	1,120
Total Effect on the Deficit[a]	-2	-20	-29	-36	-63	-93	-118	-140	-162	-185	-208	-241	-1,054
Total Deficit Under Scenario 1	-1,482	-1,120	-733	-570	-614	-752	-735	-750	-857	-924	-971	-3,788	-8,025
Debt Held by the Public at the End of the Year Under Scenario 1	10,433	11,621	12,438	13,084	13,776	14,602	15,427	16,269	17,221	18,241	19,311	n.a.	n.a.
Scenario 2: Interest Rates Similar to Rates That Occurred Between 1981 and 1990													
Effect on the Deficit													
Revenues	-1	-4	2	12	19	22	32	41	47	53	57	52	283
Interest													
Rate effect	2	27	75	150	250	358	467	549	620	686	738	859	3,919
Debt service	*	1	3	11	29	63	113	176	253	344	450	107	1,443
Subtotal, interest	2	27	78	161	279	421	580	725	872	1,029	1,188	967	5,362
Total Effect on the Deficit[a]	-2	-31	-76	-149	-259	-399	-548	-684	-825	-977	-1,130	-915	-5,079
Total Deficit Under Scenario 2	**-1,482**	**-1,130**	**-780**	**-683**	**-810**	**-1,058**	**-1,165**	**-1,295**	**-1,521**	**-1,715**	**-1,894**	**-4,461**	**-12,050**
Debt Held by the Public at the End of the Year Under Scenario 2	10,433	11,632	12,496	13,255	14,144	15,276	16,530	17,917	19,532	21,344	23,336	n.a.	n.a.
Scenario 3: Interest Rates Similar to the 10 Highest Projections in Selected *Blue Chip* Economic Forecasts[b]													
Effect on the Deficit													
Revenues	*	-1	*	3	4	3	5	7	8	9	9	10	47
Interest													
Rate effect	2	19	53	83	101	107	109	118	123	129	134	362	976
Debt service	*	*	2	6	11	18	25	33	42	51	62	37	249
Subtotal, interest	2	19	55	88	112	124	134	151	165	181	196	398	1,225
Total Effect on the Deficit[a]	-3	-20	-55	-85	-108	-121	-130	-144	-158	-172	-187	-388	-1,178
Total Deficit Under Scenario 3	**-1,482**	**-1,119**	**-759**	**-618**	**-659**	**-780**	**-746**	**-755**	**-853**	**-911**	**-950**	**-3,935**	**-8,149**
Debt Held by the Public at the End of the Year Under Scenario 3	10,434	11,621	12,464	13,159	13,896	14,750	15,586	16,433	17,380	18,387	19,435	n.a.	n.a.
Memorandum:													
Total Deficit Under CBO's January Baseline[c]	-1,480	-1,100	-704	-533	-551	-659	-617	-610	-696	-739	-763	-3,547	-6,971
Debt Held by the Public at the End of the Year in CBO's January Baseline[c]	10,430	11,598	12,386	12,996	13,625	14,358	15,064	15,767	16,557	17,392	18,253	n.a.	n.a.

Source: Congressional Budget Office.

Notes: Revenues are primarily remittances by the Federal Reserve System.

* = between -$500 million and $500 million; n.a. = not applicable.

a. Negative numbers indicate an increase relative to the baseline deficit projection.

b. Based on the 10 highest interest rate projections in the *Blue Chip* economic forecasts of October 2010 and February 2011, as described in the text.

c. As reported in CBO's *The Budget and Economic Outlook: Fiscal Years 2011 Through 2021* (January 2011).