A Simple Measure of the
Distributional Burden of Debt Accumulation

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Abstract

Distributional analysis is an important feature in discussions of fiscal policy changes. While changes in taxes and spending are typically subject to distributional scoring, the distributional costs of changes in net debt are generally ignored. This paper proposes a measure of the distributional burden of servicing the debt. Our primary measure constructs the real annual cost of servicing the debt for households at various levels of income. The distributional burden of the debt depends critically on the level of interest rates and the manner in which the debt service is financed. Using alternative assumptions about financing, we assess the distributional burden of the current level of government debt and the burden of future debt projected to accumulate under current law, current policy, and the Administration's budget.

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I)   Introduction

Since 2001, a spate of large annual deficits has swollen the nation's debt to the highest levels as a share of GDP since World War II. The future prospects for the budget are even worse (Auerbach and Gale 2010). While recent increases in the debt have been driven by sluggish economic activity and fiscal policy stimulus associated with the recent recession, demographic shifts put additional pressure on entitlement spending. These structural deficits are manifest in nearly every budget outlook.

Motivated by these problems, a large literature assesses the role of fiscal policy and the costs of sustained deficits on the economy.[1] The primary macroeconomic consequences of unchecked debt are a reduction in national savings and future national income and a potential increase in interest rates.[2]

While substantial attention has been paid to the macroeconomic consequences of government debt, less is understood about the distributional costs of servicing the debt. In this paper, we develop a simple measure of the distributional burden of debt across income groups and use it to assess the burden of debt accumulation. Servicing the debt places an additional burden on the budget that will need to be met by either increasing taxes or decreasing spending.[3] The distributional consequences of such policies are often ignored.

Distributional analysis is central to understanding the effects of fiscal policy. When the government runs a balanced budget, it is sufficient to estimate the distributional effects of spending and tax policy as is commonly done by the Congressional Budget Office and the Joint Committee on Taxation. However, recent fiscal plans have been associated with large changes in the debt, which are not typically subject to distributional analysis.[4] The goal of this paper is to offer simple measures of the distributional effects of changes in government debt that can be used to easily augment distributional analysis of the effects of fiscal policy changes when they are not fully financed.

Our measure only accounts for the distributional impact of the level of debt, holding all else equal. Motivated by Barro (1979), we assume that the debt is serviced every year and not paid down. We assume that, on the margin, the revenue needed to service the debt is raised through the tax system. These assumptions allow us to calculate the annual distributional burden of accumulated debt.

A full assessment of the distributional impact of fiscal policy must account for the impact of changes to spending and taxes that contribute to the deficit, as well as that of the accumulated debt. Assessing the distributional cost of servicing the debt provides the opportunity cost of changes to spending and taxes that are not debt neutral. When there is a sizable budget gap, it is useful to account for the cost of servicing debt so that the distributional impact of spending cuts and tax hikes are not overstated.

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[1] For surveys of the literature, see Elmendorf and Mankiw (1999), Gale and Orszag (2003), and Seater (1993).

[2] While the empirical evidence is mixed, recent studies that include information about expected future deficits find significant effects on long term bond yields. See for instance Engen and Hubbard (2004), Laubach (2009), Tvares and Valkanov (2001), and Canzoneri, Cumby, and Diba (2002). Gale and Orszag (2003) provide a summary.

[3] Adjusting taxation and spending at their current levels to cause fewer distortions in the economy might also increase the growth prospects of the economy, but likely not by enough to stabilize debt.

[4] Elmendorf et al. (2008) assess the distributional effects of the 2001 and 2003 tax cuts. Assumptions about how the tax cuts are eventually financed have large consequences for the distributional burden of the tax policy.

The assumption that the debt is serviced, on the margin, through taxation enables us to assess relevant policy proposals using distributional analyses from the Tax Policy Center and debt projections from the Congressional Budget Office. We consider four different assumptions regarding how the burden of servicing the debt might be distributed across households of various income groups. We list these here in order of decreasing progressivity. In the first scenario, we assume that, on the margin, the debt is serviced with the individual income tax, and so the progressivity of the financing burden matches that of the individual income tax code. In the second scenario, we assume that marginal debt is serviced with all federal taxes and so the financing burden matches the progressivity of the overall federal tax code. In the third scenario, we assume the debt is serviced by raising revenue from households proportional to their pre-tax income, so the financing burden matches the progressivity of a flat-rate income tax. In the fourth scenario, the debt service is proportioned evenly across all taxpayers and so the financing burden matches the progressivity of a lump-sum charge.

Accurately projecting the budget is particularly difficult right now because large portions of the tax code and government spending are scheduled to change in January 2013. Following Auerbach and Gale (2010), we examine the cost of the total accumulated debt of the United States, the debt burden accumulated over recent presidencies, and projections of debt accrual over the next ten years under current law, current policy, and the Administration's 2013 budget. The projection under current law assumes that all of the many changes scheduled to the tax code and spending side of government occur. Alternately, the current policy projections assume that only a select few of the changes occur. Finally, the administration's budget provides a middle ground between these two extremes. While it is unlikely that policy will exactly follow any of these paths, they offer a range of possible outcomes for both future spending and tax policy. The difference between these policy paths provides insight into the distributional consequences relating to the trajectory of the country's debt and possible levels of progressivity in the tax code. These three policy options are also a convenient focus of analysis because of the availability of in-depth distributional analyses and budget projections from the Tax Policy Center and the Congressional Budget Office.

The outline of the paper is as follows. In Section II, we discuss our methodology and offer an overview of assumptions and limitations. In Section III, we describe how to assess the cost of a marginal one trillion dollars of debt on different income groups. This exercise is an illustrative example that clarifies the methodology and assumptions that underlie our calculations. In Section IV, we assess the distributional implications for a number of scenarios, including the distributional costs of our current debt and the projected debt under future projections of current law, current policy, and the Administration budget. Section V concludes.

II)   **Methodology**

A commonly reported method for attributing the burden of debt is to divide the total accumulated debt by the number of individuals in America. Currently, this measure implies about $50,000 of debt per person (Halper 2012). While it is easier to think about numbers in the thousands than the trillions, the burden of the debt will certainly not be split evenly amongst the living population. Instead, the burden will have different impacts on individuals of different incomes and will, in all likelihood, be shared by future generations.

To assess the distributional impact of the debt, assumptions must be made regarding the timing of payments and the method of finance. To deal with the issue of timing, we measure the cost of servicing the debt in each period by paying the real interest costs. This is the period cost of having a given level of debt assuming that none of the debt is paid off, in real terms. To assess the distributional burden, we assume that debt is serviced, on the margin, with tax revenues. We examine four scenarios regarding this level of progressivity based on different assumptions about how taxes are raised, as outlined in the introduction.

Looking at the dollar cost of servicing the debt each year is a reasonable measure of the cost of debt for a number of reasons. First, from a theoretical perspective, Barro (1979) shows that for a fixed debt level the optimal government policy is to simply service the debt with a constant tax rate rather than pay it down over time. Second, given current budget trajectories, there is no clear plan to reduce the real level of debt.[5] Under our assumption, the real burden of servicing a dollar of debt issued today remains steady over time. The burden as a share of GDP falls, however, due to the growth of real GDP.

While we will further elaborate on our assumptions in the exposition below, it is useful to emphasize our major assumptions before we begin. First, the analysis ignores any macroeconomic consequences of changes in the debt level. This assumption has the potential to understate the total debt burden if increases in debt lead to substantially lower national saving, increased interest rates, a heightened risk of financial crisis, or a higher probability of a U.S. government default. The distributional impact of these effects would be, at best, a matter for speculation.

Second, the distributional impact of debt depends on the progressivity of the tax instruments used to service the debt. In order to highlight the sensitivity of our results to assumptions regarding levels of progressivity, we consider four scenarios of how the debt service is financed. For the analysis of the four scenarios, we use distributional tables for 2013 that are available from the Tax Policy Center.[6]

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[5] Previous studies have considered the deadweight loss of servicing the debt. There is a discussion of this approach in Elmendorf and Mankiw (1999). This approach depends on both the interest rate and the loss per dollar raised from the tax code. We, instead, are interested in the distributional consequences of servicing the debt, so we use information on the progressivity of the tax code.

[6] A potential drawback of this analysis is that the distribution of tax incidence is not static and hence could change substantially over time. This can happen either because the tax code changes or because the distribution of income shifts. While both of these factors introduce instability, especially in the long run estimates, it is unclear how either of these will evolve. In this light, the results should be interpreted as the distributional impact of

Much of the discussion in the text will focus on the results where the debt is serviced with all federal taxes. This financing method provides an intermediate level of progressivity, as it is more progressive than assuming debt is serviced in proportion to income and less progressive than an across-the-board service only in individual income taxes.[7] On the other hand, if the interest payments crowd out federal spending, the lump sum financing method could serve as a proxy for assessing the distributional burden.

III)   The Distributional Impact of One Trillion Dollars of Debt: An Illustrative Example

This section computes the distributional impact of an increase in the national debt by one trillion dollars. While interesting in its own right, the calculation illustrates the methodology used to compute the distributional impact of an increased amount of debt. Since we assume that the debt is serviced through tax revenues, we first need information on the progressivity of the tax code. For this illustrative example, we consider the scenario in which marginal interest costs are paid for by proportionately higher federal taxes. We also limit the example to the case in which the future tax code is determined by current policy (extending all 2012 policies into 2013) rather than current law or the Administration's budget. Later in the paper, we will display results for other combinations of the margin at which interest payments are incurred and the budget trajectory.

Column (1) of Table 1 displays the 2013 share of taxes by different income groups under current policy.[8] Our assumptions of distributional impact rely on the tax regime when the interest is being paid. As expected, the shares indicate that higher-income groups bear large shares of the tax burden. This is the case both because they earn more--as the income distribution has become more skewed over time, the tax burden on the wealthiest individuals has increased--and because of the progressivity of the tax system.

The shares reported in Table 1 reflect both the average tax rates paid per household and the number of households in each income group. Information about the number of households per income group will later be important for constructing the average tax burden per household, and are included in column (2) of Table 1.

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additional debt for the 2013 distribution of taxes and income. As discussed in the text, all values reported are also in terms of real dollars, so increases in real income over time will reduce the burden.

[7] There are recent historical examples in which taxes other than individual income taxes of all areas of the tax code being hiked to cover general spending. The top statutory corporate income tax rate, for example, was hiked from 34 percent to 35 percent in the Omnibus Budget Reconciliation Act of 1993. Even payroll taxes, which are earmarked to pay for Social Security and Medicare Part A, have also been changed in response to general budgetary pressures. Most recently, the employee Medicare payroll tax was increased, effective in 2013, from 1.45 percent to 2.35 percent for high earners to offset part of the cost of the Affordable Care Act.

[8] The Tax Policy Center excludes tax units with negative cash income from the "Less than 10" income class, but includes them in the totals. This makes comparing the results for households with income less than 10,000 slightly less accurate, so we will focus our comparisons for low income groups on households earning between 10,000 and 20,000 dollars per year.

For example, column (1) of Table 1 shows that households earning 10-20 thousand per year are responsible for 0.11 percent of the tax burden. Households earning from 50-75 thousand dollars are responsible for 11.73 percent, and households who earn from 200-500 thousand dollars per year bear 15.27 percent of the burden.[9] We report the shares under different assumptions of progressivity in Table A1 of the Appendix.

Using the distributional shares of the tax system from column (1), an increase in the debt of one trillion dollars can be distributed across groups in the population. Column (3) shows how much of the one trillion dollars each group would pay if the debt were to be paid off in 2013. The numbers in the table are in billions of dollars. To pay off one trillion dollars of debt the group of households making 10-20 thousand dollars per year would pay 2.6 billion dollars. For the groups of households earning from 50-75 thousand and 200-500 thousand would be responsible for 117.3 billion dollars and 152.7 billion dollars, respectively.

A major problem with interpreting the magnitude of the numbers in column (3) is that there are different numbers of households in each income group. Column (4) divides by the number of households to show the debt per household for each income group, with the values reported in dollars. For example, each household making from 10-20 thousand dollars would need to pay $107 to pay their share of reducing the debt by one trillion dollars. Each household making from 50-75 thousand would need to pay $4,576 to pay off their share of the debt and those making from 200-500 thousand per year would need to pay $31,946.

Column (4) provides an interesting way to view the distributional burden of the debt. Instead of just dividing the total debt by the population, it reports the average burden of paying off one trillion dollars of debt by households of different incomes based on their current debt burdens. As can be seen by the bottom entry of column (4), the simple method of dividing the total debt burden by the number of households would indicate that for one trillion dollars of debt each household would owe approximately $6,319. In contrast, the distributional analysis suggests that households earning less than 30 thousand dollars per year would be responsible for less than one thousand dollars of the debt reduction. Similarly, it is informative to note that high income households would end up paying substantially larger portions.

The final piece of the analysis consists of computing the annual cost of servicing the debt. To compute this annual cost, we use the long-run average effective real interest rate on U.S. debt from the Congressional Budget Office. According to the Congressional Budget Office, the average effective real interest rate on U.S. debt will be 2.7 percent in 2025 and then remain at approximately the same level until their projections end in 2087.[10] To avoid having our results hinge on the year of analysis, we use the long run average of 2.7 percent. There are two important caveats. As real income grows over time,

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[9] In the text we focus the analysis on three groups of households: those earning 10-20, 50-75, and 200-500 thousand per year, which allows us to highlight outcomes for groups representing the working poor, middle class, and upper income groups. As shown in Column (2) of Table 1, these groups each have a substantial number of households also making them slightly more representative.

[10] The 2012 CBO Long Term Budget Outlook Supplemental Tables show average real annual interest rates for 10 year Treasury bonds leveling out at 3.0 percent starting in 2025. A footnote indicates that the average effective rate is 0.3 percentage points below the 10 year Treasury rate.

a fixed cost of debt service becomes less burdensome. Second, it should be noted that interest rates are currently much lower in the U.S. Using the long run average instead of current implies that the numbers should be interpreted as a long run expected cost of servicing the debt. Calculations for lower interest rates are included in the appendix.

At the 2.7 percent rate, the cost of servicing one trillion dollars of debt costs $27 billion each year. Column (5) is computed by multiplying each number in column (4) by the interest rate.[11] These results can be interpreted to say that servicing one trillion dollars of debt for one year requires $3 higher taxes on households earning from 10-20 thousand dollars of income, $124 higher taxes for households earning 50-75 thousand dollars, and $863 higher taxes for households earning 200-500 thousand dollars.

Table 1: One Trillion Dollars: an Illustrative Example

Cash Income Level (thousands)	(1) Share of Total Taxes (%) (Current Law)	(2) Number of Tax Units (thousands)	(3) One Trillion Dollars Distributed Across Income Groups ($Billion)	(4) Household Shares of One Trillion Dollars ($)	(5) Expected Annual Household Cost of Servicing One Trillion Dollars of Debt ($)
$					
Less than 10	0.110%	16,041	1.10	68.57	1.85
10-20	0.260%	24,243	2.60	107.25	2.90
20-30	1.420%	19,317	14.20	735.10	19.85
30-40	3.100%	17,482	31.00	1,773.25	47.88
40-50	3.820%	13,879	38.20	2,752.36	74.31
50-75	11.730%	25,633	117.30	4,576.13	123.56
75-100	10.710%	14,610	107.10	7,330.60	197.93
100-200	25.630%	20,204	256.30	12,685.61	342.51
200-500	15.270%	4,780	152.70	31,945.61	862.53
500-1,000	6.630%	728	66.30	91,071.43	2,458.93
More than 1,000	21.160%	433	211.60	488,683.60	13,194.46
Total	100.000%	158,260	1000.00	6,318.72	170.61

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

In Table 2, we report results regarding the long-run average annual household costs of the interest on one trillion dollars of debt for different assumptions about how the revenues are raised through the tax code. Columns (1)–(3) assume that, on the margin, interest costs are funded by proportionately increasing all federal taxes. Column (1) assumes that the tax code follows current law (notably, allowing provisions in the Bush tax cuts to expire from no agreement on the fiscal cliff), column (2) assumes that the tax code follows current policy (extending 2012 policies to 2013), and column (3) assumes full enactment of the Obama Administration's tax changes outlined in the Administration budget. Columns

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[11] Table A4 in the appendix shows these results for current policy using the CBO's interest rate projections for the years between 2012 and 2025.

(4) and (5) assume that interest costs are funded, on the margin, through a proportionate increase in individual income taxes.[12] Column (4) assumes the tax code follows current law, and column (5) assumes the tax code follows current policy. We could not obtain distributional shares for the individual income tax under the Administration budget. Column (6) assumes that interest costs are funded by a charge proportional to pre-tax income, and column (7) assumes they are funded by an equal charge for all taxpayers.[13] Both the income-proportional and lump-sum charges apply to all of the policy outlooks since our data assumes static numbers of households per income group and pre-tax incomes.

Comparing the columns in the table shows that individual income taxes are most progressive followed by all federal taxes, income-proportional taxes, and lump-sum taxes. Moreover, columns (1)-(3) show the tax portion of the Administration budget is the most progressive, followed by current policy and current law.

Appendix Tables A1–A3 contain the intermediate steps required to compute the results in Table 2.

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[12] A lower bound is set at zero for the share of taxes paid by any income group. The negative shares reported by TPC for the bottom through groups are distributed the other income groups.
[13] Here we include taxpayers with negative cash income. Excluding those taxpayers would make this number higher.

Table 2: Expected Annual Household Costs of Servicing One Trillion Dollars of Debt across a Range of Progressivity ($)

|	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		All Federal Taxes			Individual Income Taxes	Proportional to Income	Lump Sum
Cash Income Level	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	3.03	1.85	1.90	0.00	0.00	13.23	170.61
10-20	6.13	2.90	3.23	0.00	0.00	37.06	170.61
20-30	24.46	19.85	18.90	0.00	0.00	61.55	170.61
30-40	50.50	47.88	45.03	21.53	6.79	87.30	170.61
40-50	74.90	74.31	70.17	45.65	33.82	111.92	170.61
50-75	121.34	123.56	116.31	91.43	84.41	152.27	170.61
75-100	194.05	197.93	185.98	162.77	156.39	216.51	170.61
100-200	341.31	342.51	324.22	327.92	316.29	328.27	170.61
200-500	851.80	862.53	858.00	1,011.68	1,070.36	696.22	170.61
500-1,000	2,392.17	2,458.93	2,606.88	3,175.63	3,510.42	1,676.59	170.61
More than 1,000	13,188.22	13,194.46	14,773.84	17,309.45	18,248.11	8,086.47	170.61
Mean	170.61	170.61	170.61	170.61	170.61	170.61	170.61

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

IV)   Results from Historical and Future Debt Accumulation

In this section, we use the method outlined in Section III to compute the distributional burden of historically accumulated debt and of future projected debt for each of three budget scenarios.[14]

Figure 1 displays projected nominal debt levels for the period from 2012–2022 under each of the three policy options along with the history of nominal debt levels since 1940 using data from the Congressional Budget Office. The figure shows that nominal debt has risen substantially since the mid-1970s. Under all three scenarios, the nominal debt is expected to continue to grow. Under current law, the fiscal cliff scenario implies a large reduction in the growth of nominal debt. Maintaining all current policies implies that debt continues to grow rapidly. Finally, under the administration's budget nominal debt grows at an intermediate rate.   This section assesses the distributional burden of our current level of debt, the burden of recent changes by presidential term, and the burden from each of the three fiscal scenarios scored by the Congressional Budget Office.

Figure 1: Nominal Debt from 1940–2022 under Three Budget Scenarios ($Trillions)

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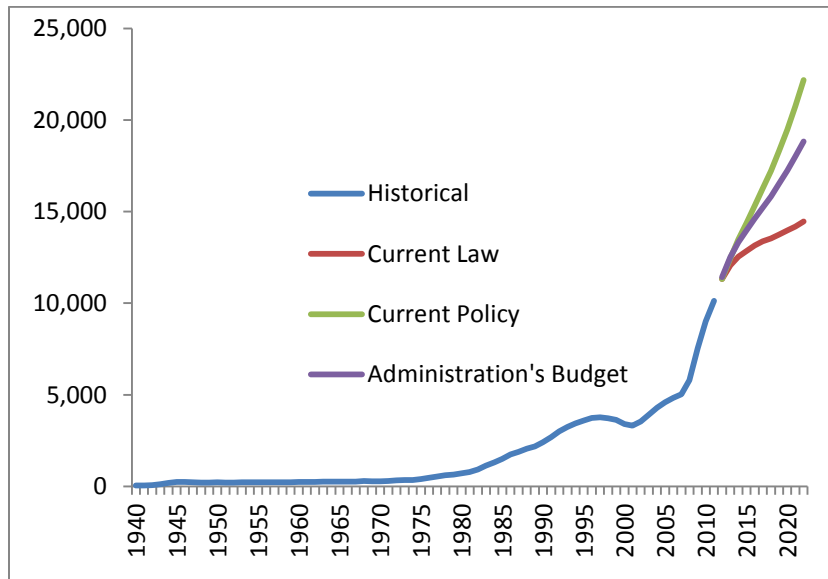
[14] While there are three different policies that we consider, there are subtle differences in the analyses available from the Tax Policy Center that should be kept in mind when attempting to make comparisons. Cash income levels are in thousands of 2012 dollars for current law and current policy, but thousands of 2011 dollars for the Administration's budget. This discrepancy is due TPC having updated the Administration distribution tables longer ago than the other two, and it likely has a negligible effect since CPI inflation was low between 2011 and 2012 (U.S. Department of Labor 2012).

To conduct the analysis, the results of Table 2 on the household costs of servicing one trillion dollars of debt can be scaled to assess each of the scenarios. Providing the distributional burden of historical amounts of accumulated debt or debt under a variety of budget outlooks becomes as simple as multiplying the appropriate column by the amount of debt accumulation (measured in trillions of dollars). The tables report all four scenarios regarding the marginal source of revenue used to service the debt. However, the text highlights the results implied by the proportionate increase in all federal taxes.

IV.A)   All Current Debt

According to the Treasury Department,[15] the government has $11.254 trillion of "net" debt outstanding as of September 26, 2012. Table 3 distributes the interest costs of servicing the current level of debt by households across income groups. Assuming long run interest rates, the existing government net debt will require interest payments of approximately $304 billion per year. Current payments are much lower as interest rates are at historically low levels. Under the distribution of the tax code implied by current law, households with cash income between from 10-20 thousand dollars will bear $69 per year of the interest payments on today's stock of debt. Households with cash income from 50–75 thousand dollars will bear $1,366 of annual costs and households with cash income from 200–500 thousand dollars will bear $9,586. Under a current policy distribution, these income groups would bear $33, $1390, and $9,707 of the interest costs, respectively. Under the administration's budget, these income groups would bear $36, $1,309, and $9,656.

Table A5 of the Appendix provides the household share of all government net debt distributed across income groups. In Tables A6 through A11, we conduct the same exercise as in Table 3, but for the amount of debt accumulated under the terms of recent presidents George W. Bush and Barack Obama.

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[15] http://www.treasurydirect.gov/NP/BPDLogin?application=np

Table 3: Expected Annual Household Costs of Servicing All Government Net Debt ($)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
Cash Income Level	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	34.10	20.84	21.34	0.00	0.00	148.85	1,919.99
10-20	68.94	32.59	36.39	0.00	0.00	417.13	1,919.99
20-30	275.28	223.37	212.66	0.00	0.00	692.70	1,919.99
30-40	568.36	538.82	506.73	242.35	76.36	982.52	1,919.99
40-50	842.89	836.33	789.71	513.80	380.57	1,259.58	1,919.99
50-75	1,365.60	1,390.49	1,308.90	1,028.98	949.92	1,713.60	1,919.99
75-100	2,183.78	2,227.46	2,093.06	1,831.87	1,759.98	2,436.61	1,919.99
100-200	3,841.09	3,854.62	3,648.79	3,690.47	3,559.49	3,694.40	1,919.99
200-500	9,586.15	9,706.93	9,655.96	11,385.42	12,045.86	7,835.28	1,919.99
500-1,000	26,921.48	27,672.78	29,337.83	35,738.59	39,506.29	18,868.38	1,919.99
More than 1,000	148,420.25	148,490.42	166,264.81	194,800.56	205,364.26	91,005.08	1,919.99
Mean	1919.99	1919.99	1919.99	1919.99	1919.99	1919.99	1919.99

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

IV.B) Distributions of the Projected Accrual of Net Debt from 2013 to 2022 under Current Law, Current Policy, and the Administration's Budget

In addition to examining past accumulation of debt, we can use the method described in this paper to examine the distributional burdens from projected accrual of debt under a variety of budget outlooks. Here it is careful to match the expected debt increase and tax distribution for like plans.

We obtain projections of net debt levels at the end of fiscal year 2022 under current law, current policy, and the Administration budget from the Congressional Budget Office.[16] In addition to distributing all of three of the debt accumulations proportionally to income and in a lump sum manner, the current law increase in net debt from September 26, 2012 through 2022 of $3.210 trillion is distributed according to the Tax Policy Center's distributional analysis for current law. The current policy net debt increase of $10.927 trillion is distributed according to the Tax Policy Center's distributional analysis for current policy, and the administration's 2013 budget's net debt increase of $7.565 trillion is distributed according to the Tax Policy Center's distributional analysis of the administration's budget.

The interest costs of these plans, distributed to households by income group, are included in Tables 4–6. The annual long-run interest costs associated with the projected accrual $3.210 trillion of debt under current law is included in Table 4. It would be $20 for households with from 10–20 thousand dollars of cash income, $390 for households with from 50–75 thousand dollars of cash income and $2,734 for households with from 200–500 thousand dollars of cash income.

Table 5 shows that the $10.927 trillion of net debt projected to accrue under current policy would lead to long-run average household interest costs of $32 for the 10–20 thousand dollars income group, $1350 for the 50–75 thousand dollars income group, and $9,425 for the 200–500 thousand dollars income group.

The interest payments on the accrual of $7.565 trillion of debt from September 26, 2012 to 2022 under the Administration's budget would cost households with from 10–20 thousand dollars of cash income $24 a year in the long run. It would cost households with from 50–75 thousand dollars of cash income $880 a year, and it would cost households with from 200–500 thousand dollars of cash income $6,491 a year. These results are in Table 6. Unfortunately, we could not obtain the distribution of the individual income tax under the Administration's budget, so it is not included.

These tables show that servicing the debt with individual income taxes is most progressive, followed by all federal taxes, taxes proportional to income, and lump sum taxation (which can be interpreted as using lower spending to service the debt). The proportional tax scenario might proxy for using a mixture of lower spending and higher taxes to service the debt.

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[16] Current law and current policy projections are obtained from <http://www.cbo.gov/sites/default/files/cbofiles/attachments/08-22-2012-Update_to_Outlook.pdf>. Current law is entitled, "Baseline Projection" while current policy is entitled, "Alternative Fiscal Scenario." These match up roughly, but not exactly, with the Tax Policy Center's current law and current policy baselines. The CBO analysis of the Administration's budget is available at http://www.cbo.gov/publication/43083.

While the Administration's budget is the most progressive of the three outlooks, followed by current policy and current law, the dollar burden for low-income households is smaller under current law since the deficit is lower. This illustrates the importance of combining distributional analysis of debt accumulation with distributional analyses of changes to taxes and spending.

Appendix Tables A12–A14 detail the household shares of government net debt expected to accrue between September 26, 2012 and 2022 under these three budget outlooks.

Table 4: Expected Annual Costs of Servicing Government Net Debt Expected to Accrue Between September 26, 2012 and 2022 under Current Law

	(1)	(2)	(3)	(4)
Cash Income Level	All Federal Taxes	Individual Income Taxes	Proportional to Income	Lump Sum
$ thousands				
Less than 10	9.73	0.00	42.46	547.64
10-20	19.66	0.00	118.98	547.64
20-30	78.52	0.00	197.58	547.64
30-40	162.12	69.13	280.25	547.64
40-50	240.42	146.55	359.27	547.64
50-75	389.51	293.50	488.77	547.64
75-100	622.89	522.51	695.00	547.64
100-200	1,095.60	1,052.64	1,053.76	547.64
200-500	2,734.28	3,247.49	2,234.87	547.64
500-1,000	7,678.87	10,193.79	5,381.86	547.64
More than 1,000	42,334.19	55,563.34	25,957.55	547.64
Mean	547.64	547.64	547.64	547.64

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, CBO Updated Budget and Economic Outlook, and Authors' calculations

Table 5: Expected Annual Household Costs Servicing Government Net Debt Expected to Accrue Between September 26, 2012 and 2022 under Current Policy

Cash Income Level	(1) All Federal Taxes	(2) Individual Income Taxes	(3) Proportional to Income	(4) Lump Sum
$				
Less than 10	20.23	0.00	144.52	1,864.20
10-20	31.64	0.00	405.01	1,864.20
20-30	216.88	0.00	672.57	1,864.20
30-40	523.16	74.15	953.97	1,864.20
40-50	812.03	369.51	1,222.98	1,864.20
50-75	1,350.09	922.32	1,663.81	1,864.20
75-100	2,162.74	1,708.84	2,365.82	1,864.20
100-200	3,742.62	3,456.07	3,587.05	1,864.20
200-500	9,424.88	11,695.85	7,607.61	1,864.20
500-1,000	26,868.71	38,358.38	18,320.13	1,864.20
More than 1,000	144,175.83	199,397.12	88,360.80	1,864.20
Mean	1,864.20	1,864.20	1,864.20	1,864.20

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, CBO Updated Budget and Economic Outlook, and Authors' calculations

Table 6: Expected Annual Household Costs of Servicing Government Net Debt Expected to Accrue Between September 26, 2012 and 2022 under the Administration's Budget ($)

Cash Income Level	(1) All Federal Taxes	(2) Proportional to Income	(3) Lump Sum
$			
Less than 10	14.34	100.05	1,290.63
10-20	24.46	280.39	1,290.63
20-30	142.95	465.63	1,290.63
30-40	340.63	660.45	1,290.63
40-50	530.85	846.70	1,290.63
50-75	879.85	1,151.89	1,290.63
75-100	1,406.96	1,637.91	1,290.63
100-200	2,452.73	2,483.39	1,290.63
200-500	6,490.79	5,266.92	1,290.63
500-1,000	19,721.05	12,683.43	1,290.63
More than 1,000	111,764.11	61,174.11	1,290.63
Mean	1,290.63	1,290.63	1,290.63

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, CBO Analysis of the President's 2013 Budget, and Authors' calculations

V) Conclusion

This paper proposes a simple measure to compute the distributional burden of federal debt. The measure is the real annual cost for servicing the debt and can easily be computed using the nominal value of government debt and expected real interest rates. The distributional impact can then be computed using assumptions about the method by which debt service is financed. Using this method, we compute the average annual cost for each income group for one trillion dollars of debt and then apply the methodology to the historical accumulation of debt and to projected accumulations of debt under current law, current policy, and the Administration's budget.

The methodology in this paper is most similar to the methodology used to assess the deadweight loss of servicing the debt discussed in Elmendorf and Mankiw (1999). In their framework, the deadweight loss of servicing the debt is computed by multiplying the real interest rate by an estimate of the deadweight loss of raising a dollar of tax revenue. Rather than focusing on the aggregate deadweight loss, we instead compute the distributional cost to representative households for various levels of income. Given high levels of deficit financing under nearly all policy outlooks, understanding the distributional burden of servicing debt is important.

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Appendix

In Tables A1–A3, we display the results required to construct Table 2.

In Table A4, we examine the short-run results of the household cost of the interest on one trillion dollars of debt under current policy, which vary based on the CBO's assumptions for the interest rates in each year between 2012 and 2025.

In Table A5 provides the household share of all government net debt distributed across income groups.

In Tables A6 and A7, we examine President George W. Bush's first term, during which outstanding net debt increased by $1.040 Trillion. In order to gain insight to their policy intent, we suggest focusing on the results for President Bush's terms that rely on a Current Policy distribution of taxes since many tax changes implemented by President Bush are still in effect. Likewise, we suggest focusing on the results for President Obama's term that rely on his administration's budget.

Tables A8 and A9 examine President George W. Bush's second term, during which outstanding net debt increased by $1.889 Trillion.

Tables A10 and A11 examine President Barack Obama's first term through September 26, 2012, a period when outstanding net debt increased by $4.947 Trillion.[17]

Tables A12–A14 detail the household shares of government net debt expected to accrue between September 26, 2012 and 2022 under these three budget outlooks.

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[17] Treasury Direct does not have daily net debt data available for President Bush's first term, so for both of Bush's terms we calculated debt from January 31 to January 31. For President Obama, we calculate January 20, 2009 through September 26, 2012.

Table A1: Percent Share of Total Taxes under Various Tax Regimes

Cash Income Level	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	0.180%	0.110%	0.113%	0.000%	0.000%	0.786%	10.140%
10-20	0.550%	0.260%	0.290%	0.000%	0.000%	3.328%	15.320%
20-30	1.750%	1.420%	1.352%	0.000%	0.000%	4.404%	12.210%
30-40	3.270%	3.100%	2.915%	1.394%	0.439%	5.653%	11.050%
40-50	3.850%	3.820%	3.607%	2.347%	1.738%	5.753%	8.770%
50-75	11.520%	11.730%	11.042%	8.680%	8.013%	14.456%	16.200%
75-100	10.500%	10.710%	10.064%	8.808%	8.462%	11.716%	9.230%
100-200	25.540%	25.630%	24.261%	24.538%	23.668%	24.565%	12.770%
200-500	15.080%	15.270%	15.190%	17.910%	18.949%	12.326%	3.020%
500-1,000	6.450%	6.630%	7.029%	8.562%	9.465%	4.521%	0.460%
More than 1,000	21.150%	21.160%	23.693%	27.759%	29.265%	12.968%	0.270%
All	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A2: One Trillion Dollars Distributed Across Income Groups ($Billion)

Cash Income Level	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	1.80	1.10	1.13	0.00	0.00	7.86	101.40
10-20	5.50	2.60	2.90	0.00	0.00	33.28	153.20
20-30	17.50	14.20	13.52	0.00	0.00	44.04	122.10
30-40	32.70	31.00	29.15	13.94	4.39	56.53	110.50
40-50	38.50	38.20	36.07	23.47	17.38	57.53	87.70
50-75	115.20	117.30	110.42	86.80	80.13	144.56	162.00
75-100	105.00	107.10	100.64	88.08	84.62	117.16	92.30
100-200	255.40	256.30	242.61	245.38	236.68	245.65	127.70
200-500	150.80	152.70	151.90	179.10	189.49	123.26	30.20
500-1,000	64.50	66.30	70.29	85.62	94.65	45.21	4.60
More than 1,000	211.50	211.60	236.93	277.59	292.65	129.68	2.70
All	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A3: Household Shares of One Trillion Dollars for each Income Group ($)

Cash Income Level	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$							
Less than 10	112	69	70	0	0	490	6,319
10-20	227	107	120	0	0	1,373	6,319
20-30	906	735	700	0	0	2,280	6,319
30-40	1,870	1,773	1,668	798	251	3,233	6,319
40-50	2,774	2,752	2,599	1,691	1,252	4,145	6,319
50-75	4,494	4,576	4,308	3,386	3,126	5,639	6,319
75-100	7,187	7,331	6,888	6,029	5,792	8,019	6,319
100-200	12,641	12,686	12,008	12,145	11,714	12,158	6,319
200-500	31,548	31,946	31,778	37,470	39,643	25,786	6,319
500-1,000	88,599	91,071	96,551	117,616	130,016	62,096	6,319
More than 1,000	488,453	488,684	547,179	641,091	675,856	299,499	6,319
Mean	6,319	6,319	6,319	6,319	6,319	6,319	6,319

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A4: Household Cost of the Interest on $1 Trillion of Debt, by year ($)

Cash Income Level (thousands)	2012 0.3	2013 0.8	2014 1.2	2015 1.5	2016 1.8	2017 2.1	2018 2.2
Less than 10	0.21	0.55	0.82	1.03	1.23	1.44	1.51
10-20	0.32	0.86	1.29	1.61	1.93	2.25	2.36
20-30	2.21	5.88	8.82	11.03	13.23	15.44	16.17
30-40	5.32	14.19	21.28	26.60	31.92	37.24	39.01
40-50	8.26	22.02	33.03	41.29	49.54	57.80	60.55
50-75	13.73	36.61	54.91	68.64	82.37	96.10	100.67
75-100	21.99	58.64	87.97	109.96	131.95	153.94	161.27
100-200	38.06	101.48	152.23	190.28	228.34	266.40	279.08
200-500	95.84	255.56	383.35	479.18	575.02	670.86	702.80
500-1,000	273.21	728.57	1,092.86	1,366.07	1,639.29	1,912.50	2,003.57
More than 1,000	1,466.05	3,909.47	5,864.20	7,330.25	8,796.30	10,262.36	10,751.04
Mean	18.96	50.55	75.82	94.78	113.74	132.69	139.01
Cash Income Level (thousands)	**2019 2.4**	**2020 2.4**	**2021 2.4**	**2022 2.4**	**2023 2.6**	**2024 2.6**	**2025 2.7**
Less than 10	1.65	1.65	1.65	1.65	1.78	1.78	1.85
10-20	2.57	2.57	2.57	2.57	2.79	2.79	2.90
20-30	17.64	17.64	17.64	17.64	19.11	19.11	19.85
30-40	42.56	42.56	42.56	42.56	46.10	46.10	47.88
40-50	66.06	66.06	66.06	66.06	71.56	71.56	74.31
50-75	109.83	109.83	109.83	109.83	118.98	118.98	123.56
75-100	175.93	175.93	175.93	175.93	190.60	190.60	197.93
100-200	304.45	304.45	304.45	304.45	329.83	329.83	342.51
200-500	766.69	766.69	766.69	766.69	830.59	830.59	862.53
500-1,000	2,185.71	2,185.71	2,185.71	2,185.71	2,367.86	2,367.86	2,458.93
More than 1,000	11,728.41	11,728.41	11,728.41	11,728.41	12,705.77	12,705.77	13,194.46
Mean	151.65	151.65	151.65	151.65	164.29	164.29	170.61

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A5: Household Shares of All Government Net Debt Distributed Across Income Groups ($)

Cash Income Level	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	1,263	772	790	0	0	5,513	71,111
10-20	2,553	1,207	1,348	0	0	15,449	71,111
20-30	10,195	8,273	7,876	0	0	25,655	71,111
30-40	21,051	19,956	18,768	8,976	2,828	36,389	71,111
40-50	31,218	30,975	29,248	19,030	14,095	46,651	71,111
50-75	50,578	51,500	48,478	38,110	35,182	63,467	71,111
75-100	80,881	82,499	77,521	67,847	65,184	90,245	71,111
100-200	142,263	142,764	135,140	136,684	131,833	136,830	71,111
200-500	355,043	359,516	357,628	421,682	446,143	290,195	71,111
500-1,000	997,092	1,024,918	1,086,586	1,323,651	1,463,196	698,829	71,111
More than 1,000	5,497,046	5,499,645	6,157,956	7,214,835	7,606,084	3,370,558	71,111
Mean	71,111	71,111	71,111	71,111	71,111	71,111	71,111

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A6: Household Shares of Government Net Debt Accrued during President George W Bush's 1st Term in Office, Distributed across Income Groups ($)

Cash Income Level	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	117	71	73	0	0	509	6,571
10-20	236	112	125	0	0	1,428	6,571
20-30	942	765	728	0	0	2,371	6,571
30-40	1,945	1,844	1,734	829	261	3,363	6,571
40-50	2,885	2,862	2,703	1,759	1,303	4,311	6,571
50-75	4,674	4,759	4,480	3,522	3,251	5,865	6,571
75-100	7,474	7,624	7,164	6,270	6,024	8,340	6,571
100-200	13,147	13,193	12,489	12,631	12,183	12,645	6,571
200-500	32,810	33,223	33,049	38,968	41,229	26,817	6,571
500-1,000	92,143	94,714	100,413	122,321	135,216	64,580	6,571
More than 1,000	507,991	508,231	569,066	666,734	702,890	311,479	6,571
Mean	6,571	6,571	6,571	6,571	6,571	6,571	6,571

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A7: Expected Household Costs of Servicing Government Net Debt Accrued during President George W Bush's 1st Term in Office ($)

Cash Income Level	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	3.15	1.93	1.97	0.00	0.00	13.76	177.43
10-20	6.37	3.01	3.36	0.00	0.00	38.55	177.43
20-30	25.44	20.64	19.65	0.00	0.00	64.01	177.43
30-40	52.52	49.79	46.83	22.40	7.06	90.80	177.43
40-50	77.89	77.29	72.98	47.48	35.17	116.40	177.43
50-75	126.20	128.50	120.96	95.09	87.78	158.36	177.43
75-100	201.81	205.84	193.42	169.29	162.64	225.17	177.43
100-200	354.96	356.21	337.19	341.04	328.94	341.41	177.43
200-500	885.87	897.03	892.32	1,052.15	1,113.18	724.07	177.43
500-1,000	2,487.86	2,557.29	2,711.16	3,302.66	3,650.84	1,743.66	177.43
More than 1,000	13,715.75	13,722.24	15,364.79	18,001.83	18,978.04	8,409.92	177.43
Mean	177.43	177.43	177.43	177.43	177.43	177.43	177.43

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A8: Household Shares of Government Net Debt Accrued during President George W Bush's 2nd Term in Office, Distributed across Income Groups ($)

Cash Income Level	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	211.97	129.54	132.67	0.00	0.00	925.33	11,936.05
10-20	428.56	202.59	226.22	0.00	0.00	2,593.15	11,936.05
20-30	1,711.32	1,388.61	1,322.05	0.00	0.00	4,306.30	11,936.05
30-40	3,533.37	3,349.67	3,150.23	1,506.64	474.74	6,108.03	11,936.05
40-50	5,240.04	5,199.21	4,909.39	3,194.14	2,365.91	7,830.44	11,936.05
50-75	8,489.56	8,644.31	8,137.07	6,396.85	5,905.38	10,652.95	11,936.05
75-100	13,575.98	13,847.49	13,011.95	11,388.22	10,941.30	15,147.75	11,936.05
100-200	23,878.96	23,963.11	22,683.49	22,942.59	22,128.36	22,967.04	11,936.05
200-500	59,594.39	60,345.25	60,028.42	70,779.99	74,885.73	48,709.72	11,936.05
500-1,000	167,363.32	172,033.93	182,385.06	222,176.78	245,599.54	117,299.41	11,936.05
More than 1,000	922,687.07	923,123.33	1,033,621.68	1,211,020.46	1,276,692.01	565,753.06	11,936.05
Mean	11,936.05	11,936.05	11,936.05	11,936.05	11,936.05	11,936.05	11,936.05

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A9: Expected Household Costs of Servicing Government Net Debt Accrued during President George W Bush's 2nd Term in Office ($)

Cash Income Level	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	5.72	3.50	3.58	0.00	0.00	24.98	322.27
10-20	11.57	5.47	6.11	0.00	0.00	70.02	322.27
20-30	46.21	37.49	35.70	0.00	0.00	116.27	322.27
30-40	95.40	90.44	85.06	40.68	12.82	164.92	322.27
40-50	141.48	140.38	132.55	86.24	63.88	211.42	322.27
50-75	229.22	233.40	219.70	172.72	159.45	287.63	322.27
75-100	366.55	373.88	351.32	307.48	295.42	408.99	322.27
100-200	644.73	647.00	612.45	619.45	597.47	620.11	322.27
200-500	1,609.05	1,629.32	1,620.77	1,911.06	2,021.91	1,315.16	322.27
500-1,000	4,518.81	4,644.92	4,924.40	5,998.77	6,631.19	3,167.08	322.27
More than 1,000	24,912.55	24,924.33	27,907.79	32,697.55	34,470.68	15,275.33	322.27
Mean	322.27	322.27	322.27	322.27	322.27	322.27	322.27

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A10: Household Shares of Government Net Debt Accrued during President Obama's Term in Office through September 26, 2012, Distributed across Income Groups ($)

Cash Income Level	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	544	332	340	0	0	2,374	30,627
10-20	1,100	520	580	0	0	6,654	30,627
20-30	4,391	3,563	3,392	0	0	11,050	30,627
30-40	9,066	8,595	8,083	3,866	1,218	15,673	30,627
40-50	13,445	13,341	12,597	8,196	6,071	20,092	30,627
50-75	21,783	22,181	20,879	16,414	15,153	27,335	30,627
75-100	34,835	35,531	33,387	29,221	28,074	38,868	30,627
100-200	61,271	61,487	58,204	58,869	56,779	58,931	30,627
200-500	152,914	154,840	154,027	181,615	192,150	124,985	30,627
500-1,000	429,439	441,423	467,983	570,085	630,186	300,979	30,627
More than 1,000	2,367,530	2,368,649	2,652,178	3,107,367	3,275,874	1,451,670	30,627
Mean	30,627	30,627	30,627	30,627	30,627	30,627	30,627

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A11: Expected Household Costs of Servicing Government Net Debt Accrued during President Barack Obama's 1ˢᵗ Term in Office through September 26, 2012 ($)

Cash Income Level	All Federal Taxes			Individual Income Taxes		Proportional to Income	Lump Sum
	Current Law	Current Policy	Administration's Budget	Current Law	Current Policy	All	All
$ thousands							
Less than 10	14.99	9.16	9.38	0.00	0.00	65.43	843.98
10-20	30.30	14.32	16.00	0.00	0.00	183.36	843.98
20-30	121.01	98.19	93.48	0.00	0.00	304.49	843.98
30-40	249.84	236.85	222.75	106.53	33.57	431.89	843.98
40-50	370.52	367.63	347.14	225.85	167.29	553.68	843.98
50-75	600.29	611.23	575.36	452.31	417.56	753.26	843.98
75-100	959.94	979.14	920.06	805.25	773.65	1,071.08	843.98
100-200	1,688.45	1,694.40	1,603.92	1,622.24	1,564.67	1,623.97	843.98
200-500	4,213.85	4,266.94	4,244.54	5,004.77	5,295.08	3,444.21	843.98
500-1,000	11,834.07	12,164.32	12,896.24	15,709.86	17,366.06	8,294.11	843.98
More than 1,000	65,242.13	65,272.98	73,086.19	85,629.85	90,273.41	40,003.74	843.98
Mean	843.98	843.98	843.98	843.98	843.98	843.98	843.98

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, and Authors' calculations

Table A12: Household Shares of Government Net Debt Expected to Accrue Between September 26, 2012 and 2022 under Current Law

	(1)	(2)	(3)	(4)
Cash Income Level	**All Federal Taxes**	**Individual Income Taxes**	**Proportional to Income**	**Lump Sum**
$ thousands				
Less than 10	360	0	1,572	20,283
10-20	728	0	4,407	20,283
20-30	2,908	0	7,318	20,283
30-40	6,004	2,560	10,379	20,283
40-50	8,904	5,428	13,306	20,283
50-75	14,426	10,870	18,103	20,283
75-100	23,070	19,352	25,741	20,283
100-200	40,578	38,987	39,028	20,283
200-500	101,269	120,277	82,773	20,283
500-1,000	284,402	377,548	199,328	20,283
More than 1,000	1,567,933	2,057,901	961,391	20,283
Mean	20,283	20,283	20,283	20,283

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, CBO Updated Budget and Economic Outlook, and Authors' calculations

Table A13: Household Shares of Government Net Debt Expected to Accrue Between September 26, 2012 and 2022 under Current Policy

Cash Income Level	(1) All Federal Taxes	(2) Individual Income Taxes	(3) Proportional to Income	(4) Lump Sum
$ thousands				
Less than 10	749	0	5,353	69,045
10-20	1,172	0	15,000	69,045
20-30	8,032	0	24,910	69,045
30-40	19,376	2,746	35,332	69,045
40-50	30,075	13,686	45,296	69,045
50-75	50,003	34,160	61,622	69,045
75-100	80,101	63,290	87,623	69,045
100-200	138,616	128,002	132,854	69,045
200-500	349,070	433,180	281,763	69,045
500-1,000	995,138	1,420,681	678,523	69,045
More than 1,000	5,339,846	7,385,079	3,272,622	69,045
Mean	69,045	69,045	69,045	69,045

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, CBO Updated Budget and Economic Outlook, and Authors' calculations

Table A14: Household Shares of Government Net Debt Expected to Accrue Between September 26, 2012 and 2022 under the Administration's Budget

	(1)	(2)	(3)
Cash Income Level	All Federal Taxes	Proportional to Income	Lump Sum
$ thousands			
Less than 10	531	3,706	47,801
10-20	906	10,385	47,801
20-30	5,295	17,246	47,801
30-40	12,616	24,461	47,801
40-50	19,661	31,359	47,801
50-75	32,587	42,663	47,801
75-100	52,110	60,663	47,801
100-200	90,842	91,978	47,801
200-500	240,400	195,071	47,801
500-1,000	730,409	469,757	47,801
More than 1,000	4,139,411	2,265,708	47,801
Mean	47,801	47,801	47,801

SOURCE: TPC tables T12-0198, T12-0203, T12-0182, and T12-0042, CBO 2012 Long Term Budget Outlook, CBO Analysis of the President's 2013 Budget, and Authors' calculations