COMMITTEE FOR A RESPONSIBLE FEDERAL BUDGET

Understanding CBO's Analysis of the Senate Immigration Bill
June 20, 2013

On Tuesday, the Congressional Budget Office (CBO) released its budgetary and economic analyses of the Senate's leading immigration reform bill, S.744, the Border Security, Economic Opportunity, and Immigration Modernization Act. The legislation would modify a number of laws to allow for an increased number of immigrants to enter and remain in the country legally, on both a temporary and permanent basis, while also creating a path to legal status for currently unauthorized immigrants, tightening border security, improving domestic enforcement of immigration laws, and a number of other measures.

Ordinarily, CBO cost estimates incorporate only the direct "first order" effects and some secondary "micro-dynamic" behavioral effects. However, due to the direct effect the legislation would have on the U.S. population and labor supply, CBO's estimates also incorporate certain macro-dynamic impacts.

In addition, CBO estimates the second decade effect of the legislation and estimates (but does not incorporate into its formal score) the effect of the legislation on economic variables such as GDP, wages, and interest rates. Our main findings based on the CBO report include:

- The legislation would reduce unified budget deficits by about $200 billion over the next decade -- and about $230 billion including interest and discretionary effects.
- Both spending and revenues would increase as a result of the legislation -- by $260 and $460 billion, respectively -- as the population increases and more immigrants become U.S. taxpayers and program beneficiaries.
- The entirety of the deficit reduction, on net, is due to technically "off- budget" Social Security revenue. The legislation would modestly increase "on-budget" deficits and, thus, violate pay-as-you-go rules.
- In the second decade, the legislation would further reduce unified deficits, increasing revenue by about $1.5 trillion and spending by $800 billion.
- The legislation would increase GDP and interest rates significantly this decade and next, but would reduce wages and per capita GDP over the next decade while increasing them over the very long run.
- Incorporating economic effects, CRFB estimates that the debt would be 83 percent of GDP in 2033, as opposed to 91 percent under our baseline.

Although CRFB takes no position on immigration reform, we are pleased to see policymakers take note of important budgetary implications. Importantly, future versions of this bill, and any other proposals, should fully comply with PAYGO. The remainder of this paper explains the budgetary impacts of the bill in some detail.

What the Senate's Current Immigration Bill Would Do

The leading Senate bill reforms U.S. immigration policy in a number of ways, including:

- Tighten border security, expand fencing, and target a 90 percent effectiveness rate.
- Tighten domestic enforcement of immigration laws through the E-Verify program and a number of other anti-fraud measures.
- Create a path to citizenship through a Registered Provisional Immigrant (RPI) program, which would grant legal status to unauthorized immigrants meeting the program requirements, provide permanent residency after ten years, and citizenship status three years after achieving permanent residency.
- Implement the DREAM Act, which would offer an accelerated path to permanent residency and citizenship for some of those who entered the U.S. under the age of 16.
- Expand current visa programs to meet demand and create a merit-based program split between high-skilled and low-skilled workers.
- Institute a number of changes to non-immigrant visa programs including expanding the H-1B high-skilled visa program and creating an agricultural guest worker program.

How CBO Estimates Immigration Reform Proposals

Although CBO provides regular budgetary estimates for almost every piece of legislation considered by Congress, their estimates for potential immigration reforms differ from other estimates in some important ways. Specifically, CBO has put more attention on economic effects and the second-decade impact of immigration reform than they usually do for other legislation.

Ordinarily, CBO would evaluate the revenues and costs resulting from all "first order" effects of a given piece of legislation -- including the static impact of allocating new resources or changing tax and mandatory spending rules -- and the impact of some "second order" effects resulting from changes in behavior, such as the timing of economic decisions or effects on supply and demand. While CBO and other scoring agencies will take into account these micro-dynamic behavior changes, they typically assume macro-economic variables -- such as overall GDP, interest rates, and the size of the labor force -- remain constant.[1]

Since immigration reforms would directly affect the size of the U.S. labor force, however, CBO relaxed this rule and incorporated certain second-order macroeconomic effects in its budgetary score that otherwise would typically be excluded. Specifically, its estimates assume that immigration reform will change the size of the population, the employment rate, and taxable compensation. Importantly, CBO still holds constant various macroeconomic variables, such as the size of GDP and interest rates, although it analyzes these "third order effects" in a supplementary analysis.

Between these two analyses, CBO estimates the effect that the immigration legislation could have on spending (by category), revenue, and deficits as well as the effect on labor supply,

[1] See Committee for a Responsible Federal Budget. "Understanding Dynamic Scoring." May 31, 2012. http://crfb.org/document/report-understanding-dynamic-scoring.

employment, taxable compensation, real GDP, GNP per capita, wages, capital stock, interest rates, and productivity.

CBO's analysis of immigration reform also differs from typical cost estimates of legislation by showing a rough estimate of the effect of the bill by category in the second ten-year period.

Budgetary Impact of Immigration Reform – This Decade and Next Decade

CBO estimates that excluding interest and discretionary changes, the current immigration legislation would reduce the unified budget deficit by nearly $200 billion (0.1 percent of GDP) through 2023, including roughly $260 billion in new spending and $460 billion in new revenue.

Importantly, "first-order effects" of the bill appear to be relatively negligible and these changes are almost entirely due to "second-order effects." CBO expects the bill would increase the U.S. population by over 10 million people by 2023 and 16 million by 2033, and expand the labor supply by 3.5 percent by 2023 and 5 percent by 2033. Consequently, both taxable compensation and enrollment in various government programs would increase.

Fig. 1: Deficit Impact of Immigration Legislation (Billions)

	First 5 Years (2014-2018)	Second 5 Years (2019-2023)	First Decade (2014-2023)	Second Decade (2024-2033)
Low-Income Health Programs	$24	$87	$112	$400
Social Security and Medicare	$0	$3	$4	$70
Refundable Tax Credits	$35	$92	$127	$270
SNAP	$1	$5	$6	$40
Other Spending	$9	$5	$14	$30
Subtotal, Outlays	**$70**	**$192**	**$262**	**$810**
Social Security Payroll Taxes	-$62	-$152	-$214	-$1,500
All Other Revenue	-$64	-$181	-$245	
Subtotal, Revenue	**-$126**	**-$333**	**-$459**	**-$1,500**
Primary Deficit Impact	**-$56**	**-$141**	**-$197**	**-$690**
Interest	**-$3**	**-$29**	**-$32**	**-$340**
Deficit Impact	**-$59**	**-$170**	**-$229**	**-$1,030**
Deficit Impact with Discretionary Spending	*-$46*	*-$156*	*-$202*	*-$990*

Source: Congressional Budget Office.
*Less than $50 million.

On the revenue side, roughly half of the new funds would come from the Social Security payroll tax and half from income and other taxes; mainly as a result of more workers having more taxable compensation.

On the spending side, health care for low-income earners ($112 billion) and refundable tax credits ($127 billion) would make up the lion's share of the cost as more individuals would become eligible for these programs. Although costs for Social Security and Medicare are likely to increase significantly over the long run, there would be little short-term effect since in the earlier years of the legislation a larger U.S. population would be contributing to rather than taking from these programs.

CBO offers *very rough* estimates of the second-decade effect of the bill, finding that it would reduce deficits by about $700 billion (0.2 percent of GDP) from 2024-2033. This is the net effect of roughly $800 billion in new spending and $1.5 trillion in additional revenue. As more immigrants become eligible for benefit programs, low-income health programs ($400 billion) would overtake refundable credits ($270 billion) as the main source of the spending increase. Spending on other low-income and social insurance programs would also become a bigger factor. CBO does not attempt to evaluate the fiscal impact of the legislation in the third decade, when more immigrants would likely be collecting Social Security and Medicare benefits.

Importantly, CBO's budgetary estimates do not account for interest costs, nor do they directly account for the impact of new discretionary spending (which in theory should be paid for by reducing other discretionary spending within the existing caps). Incorporating interest effects and assuming the roughly $2 billion per year in discretionary spending occurs above the caps, the legislation would reduce total deficits by $230 billion in the first decade and by over $1 trillion in the second decade.

Separating Out the Effect on Social Security

Although CBO estimates the immigration legislation would reduce deficits by about $200 billion in the first decade, on net the entirety of that deficit comes from Social Security, which is technically "off-budget." CRFB has explained in prior analyses that Social Security can be viewed two ways -- as part of the budget or as its own self-contained program.[2] If Social Security is viewed separately, the legislation would actually **increase the deficit by $14 billion** through 2023. Incorporating interest and discretionary effects above the existing caps, the legislation would cost **$45 billion** through 2023**.**

Fig. 2: On-Budget Effect of S. 744 (billions)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2014-2023
Outlays	$5	$7	$14	$20	$24	$26	$32	$37	$44	$51	$259
Revenue	-$2	-$7	-$14	-$19	-$23	-$24	-$29	-$36	-$43	-$50	-$245
Deficit	**$3**	**$0**	**$0**	**$0**	**$2**	**$3**	**$3**	**$1**	**$1**	**$1**	**$14**
Statutory PAYGO Deficit	*$0*	*-$1*	*-$2*	*$0*	*$1*	*$2*	*$4*	*$3*	*$2*	*$1*	*$11*
Deficit Including Discretionary and Interest	*$6*	*$3*	*$3*	*$3*	*$4*	*$6*	*$6*	*$5*	*$4*	*$5*	*$45*

Source: Congressional Budget Office, CRFB calculations

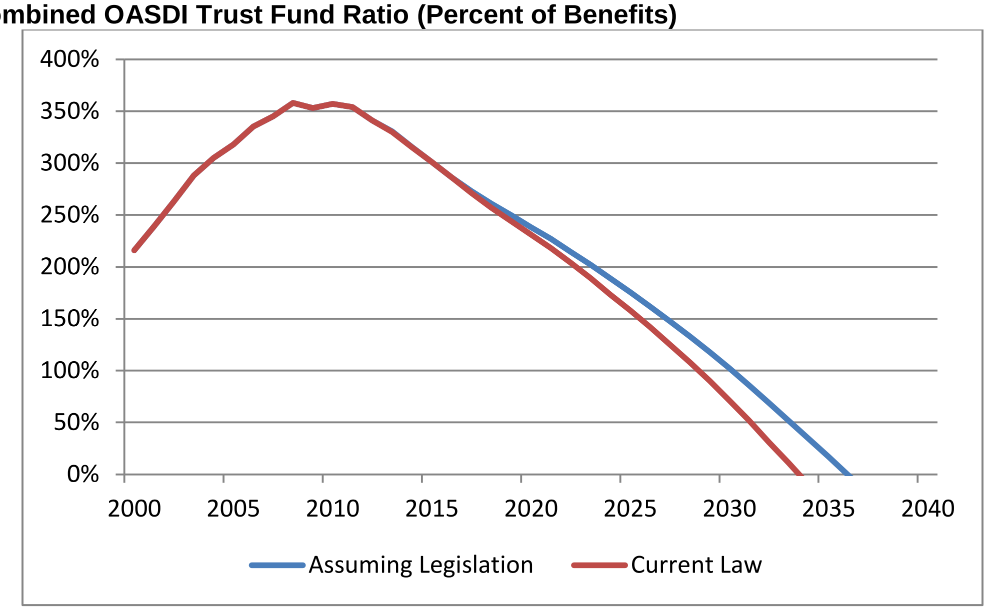
[2] See. Committee for a Responsible Federal Budget. "Social Security and the Budget." March 24, 2011. http://crfb.org/document/social-security-and-budget.

Pay-As-You-Go (PAYGO) rules require that legislation not add to the deficit over both five and ten years. The legislation violates the spirit of PAYGO by increasing on-budget deficits by $6 billion over the first five years and $14 billion over ten years. To avoid the five-year violation, the legislation designates $6 billion through 2018 ($3 billion through 2023) as emergency spending. This emergency designation appears to be completely unwarranted and reduces the integrity of PAYGO by using the designation for something that is clearly not an emergency. Lawmakers should bring this proposal, and any other immigration reform proposals, into compliance with PAYGO rules -- and without any gimmicks or unwarranted designations.

The increase in the on-budget deficit from the legislation is more than offset by "off-budget" savings to Social Security. Under the legislation, Social Security payroll tax revenues would increase by about $215 billion and Social Security spending by less than $5 billion.

Although the legislation does not estimate the Social Security effect in the second decade, we *very roughly* estimate Social Security cash-flow deficits (excluding interest) would fall by another $600 to $700 billion. As a result, the combined Social Security trust funds would last until 2035 and then be able to pay 80 percent of benefits; whereas under current law, Social Security is set to exhaust its assets in 2033 and be able to pay only 77 percent of benefits.

Fig. 3: Combined OASDI Trust Fund Ratio (Percent of Benefits)



Source: Congressional Budget Office, Social Security Administration, and CRFB calculations.

Beyond the second decade, many more immigrants would likely become Social Security beneficiaries as opposed to payroll taxpayers. CBO has not estimated the net effect in a longer-term outlook; however, the Social Security Chief Actuary has suggested that the net effect of immigration reform would likely remain positive -- but smaller -- over the next 75 years.[3] Even as the trust fund effects remain positive, it is possible that the cash-flow impact of immigration reform would turn negative, meaning that at some point down the road it may result in an increase in spending in excess of the increase in payroll tax revenues.

[3] http://www.socialsecurity.gov/OACT/solvency/MRubio_20130508.pdf

The Effect of the Immigration Legislation on the Economy

In reviewing the immigration legislation, CBO has estimated the impact on a number of economic variables. As explained earlier, three of those variables – population, employment, and taxable compensation – are used to derive the score. Other variables, including real GDP, GNP per capita, productivity, wages, and interest rates, are not incorporated into their official budget estimate, but are still reviewed in a supplementary CBO analysis.

CBO caveats their estimates by noting that the bill could have a wide range of effects depending on the model used for evaluation. In all cases, the numbers presented in this report represent their central estimate within that range.

Population, Labor Supply, and Unemployment
As a result of immigration reform, CBO expects the U.S. population would increase by slightly more than 10 million by 2023 and slightly more than 16 million by 2033. The labor force would increase as well -- by 3.5 percent in 2023 and by 5 percent in 2033. At the same time, the unemployment rate would rise somewhat through 2020 -- though the legislation would have a negligible effect thereafter. Importantly, all of these effects are incorporated into CBO's formal budget estimate.

GDP, GNP, and Average Wages
CBO finds that the immigration legislation would increase real Gross Domestic Product (GDP) by 1 percent in 2017, 3.3 percent in 2023, and 5.4 percent by 2033. Especially in the earlier years, this would largely be the effect of a larger population and labor force. In fact, GNP per capita (similar to, but not the same as, GDP per capita) would be *lower* than without the legislation through roughly 2030 -- falling by as much as 0.7 percent in 2023 before rising by 0.2 percent by 2033.

As with GNP per capita, CBO estimates that immigration reform would reduce average wages in the near-term but increase them over the long term. Specifically, average wages would fall by as much as about 0.3 percent in 2016, would be 0.1 percent lower than current law in 2023, and would then rise to more than 0.5 percent higher than current law by 2033. Importantly, it is not clear whether the initial reduction in average wages is the result of current citizens experiencing slower wage growth or new immigrant with lower average wages reducing the mean.

Capital Stock and Interest Rates
With labor supply expanding, the number of savers and investors would grow, as would the need for more machinery. As a result, CBO expects the capital stock would grow relative to current law -- by 2 percent in 2023 and 5 percent in 2033. As long as demand for capital remained elevated, so too would interest rates -- rising by about 0.4 points by 2023 and 0.3 points by 2033.

Productivity
Finally, total factor productivity -- the productivity of labor and capital combined -- would increase by 0.7 percent in 2023 and 1 percent in 2033 as a result of the increased labor supply

and capital stock. CBO attributes this increase to the influx of immigrants which *"would lead to increased innovation and task specialization. And those improvements in turn would increase economic output for any given supply of labor and capital stock."* This rise in productivity would be a driver of increases in output and wages as times goes on.

Fig. 4: Economic Impact of S. 744 (Central Estimate)

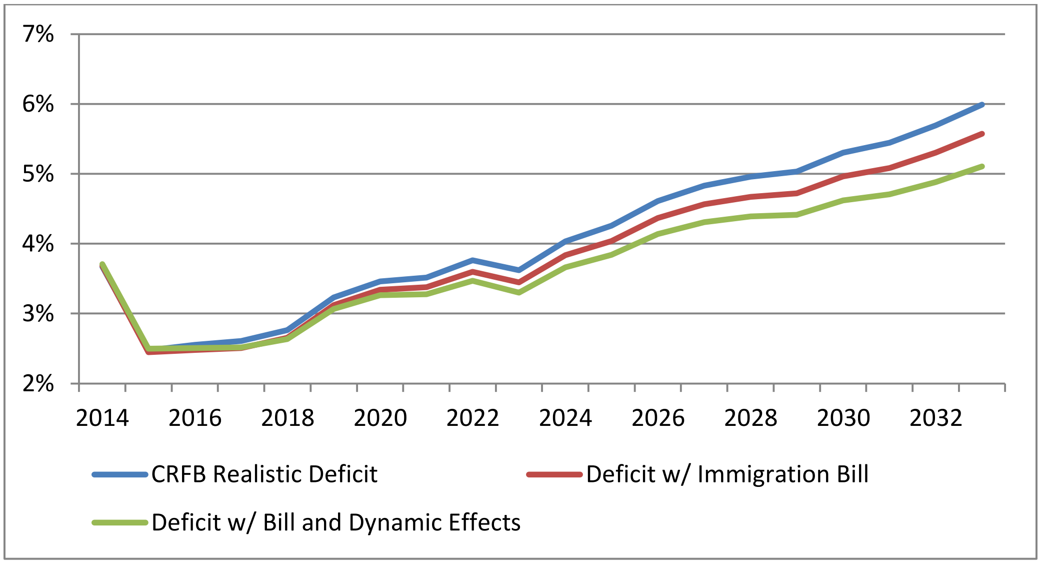
Economic Indicator	Effect in 2023	Effect in 2033
Real GDP	+3.3%	+5.4%
Real GNP	+2.4%	+4.5%
Real GNP per capita	-0.7%	+0.2%
Interest rates	+0.4 percentage points	+0.3 percentage points
Capital stock	+0.2%	+0.5%
Total factor productivity	+0.7%	+1.0%
Average wages	-0.1%	+0.5%
Population	+3%	+4%
Labor Force	+3.5%	+5%
Unemployment	+0.0%	+0.0%

Source: Congressional Budget Office.

Dynamic Budgetary Effect of Immigration Reform

While CBO does not incorporate changes in GDP and interest rates into its official score, it does provide a rough estimate of how those changes might impact their budgetary score. In rough terms, CBO suggests that the deficit impact of immigration reform would remain roughly unchanged in the first decade (a $30 billion deficit increase in the first five years and a corresponding decrease in the last five years). In the second decade, they estimate these variables would result in a further $300 billion (0.1 percent of GDP) of primary deficit reduction in the second decade. Incorporating these estimates, along with interest effects, debt would decline by roughly $1.6 trillion (4 percent of current law GDP) in 2033.

Fig. 5: Deficit as a Percent of GDP

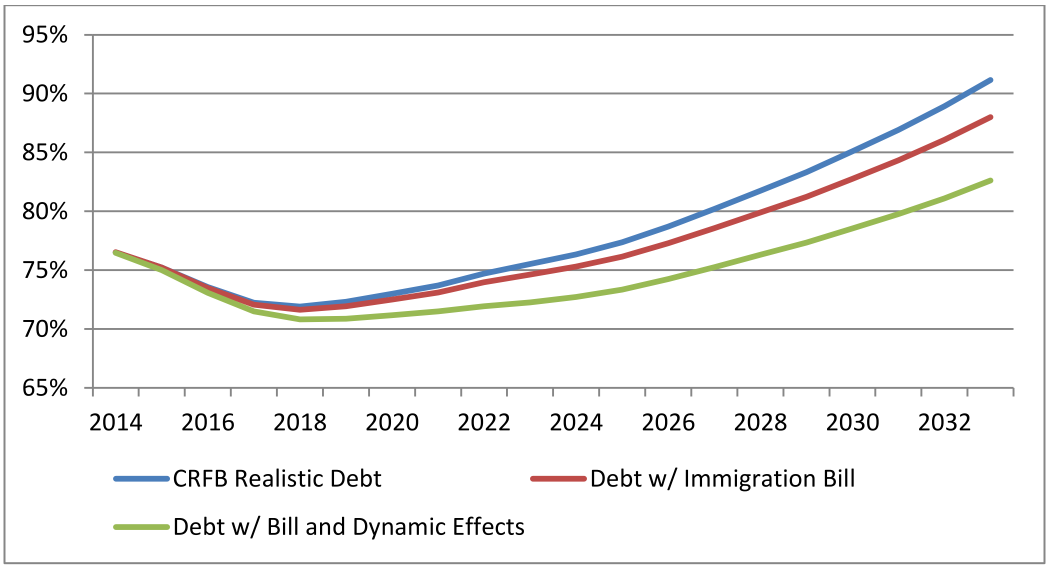


Source: Congressional Budget Office, CRFB calculations

Using CBO's numbers, we can roughly estimate how the score of the legislation and the additional deficit reduction from economic changes would impact deficits and debt as a share of GDP under the CRFB Realistic Baseline.[4] Prior to the legislation, CRFB projects deficits of 3.6 percent of GDP and debt of nearly 76 percent of GDP in 2023. These would fall to 3.4 percent and 75 percent, respectively, assuming CBO's standard scoring. Incorporating dynamic effects of the legislation, both on the deficit itself and the underlying GDP denominator, deficits and debt would fall further to 3.3 percent and 72 percent, respectively.

Looking further to 2033, the CRFB Realistic Baseline projects deficits and debt to be 6.0 percent of GDP and 91 percent, respectively. Incorporating CBO's standard scoring of the immigration reform bill leaves deficits and debt at 5.6 percent and 88 percent, respectively. Incorporating the dynamic effects, including the new GDP estimates, deficits would fall to 5.1 percent of GDP and debt to 83 percent.

Fig. 6: Debt as a Percent of GDP



Source: Congressional Budget Office, CRFB calculations

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The CBO analysis of the Senate's current immigration reform bill shows that it would substantially reduce unified federal budget deficits and debt (both this decade and beyond), grow the overall economy, and improve Social Security's long-term finances. At the same time, the legislation would reduce average real wages through 2025 and would fail to reduce the on-budget deficit (which sets aside Social Security as a self-contained program), which means it would violate statutory PAYGO rules. Even if this flaw were corrected, lawmakers would still have a long way to go in order to ensure a sustainable fiscal future.

CRFB takes no position on immigration reform bills, but will continue to analyze the fiscal impacts of any subsequent proposals given the significant effects on the federal budget and the overall economy.

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[4] See Committee for a Responsible Federal Budget. CRFB Realistic Baseline. http://crfb.org/crfbs-realistic-baseline.