

**A REPORT TO THE CONGRESSIONAL BUDGET OFFICE
OF THE MACROECONOMIC EFFECTS OF H.R. 2510,
“BONUS DEPRECIATION MODIFIED AND MADE PERMANENT,”
AS ORDERED TO BE REPORTED
BY THE HOUSE COMMITTEE ON WAYS AND MEANS**

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INTRODUCTION

Pursuant to S. Con. Res. 11 (Concurrent Resolution on the Budget for Fiscal Year 2016) section 3112, the staff of the Joint Committee on Taxation (“Joint Committee staff”) has estimated the budgetary effects of changes in economic output, employment, and capital stock resulting from the H.R. 2510, a bill “To amend the Internal Revenue Code of 1986 to modify and make permanent bonus depreciation.”¹

¹ This document may be cited as follows: Joint Committee on Taxation, *A Report to the Congressional Budget Office of H.R. 2510, “Macroeconomic Effects of the Bonus Depreciation Modified and Made Permanent,” as ordered to be Reported by the House Committee on Ways and Means* (JCX-134-15), October 27, 2015. This document can also be found on the Joint Committee on Taxation website at www.jct.gov.

I. OVERVIEW

The following discussion analyzes the macroeconomic effects of the bill. The estimate of the macroeconomic revenue feedback effects of this legislation and the following supplementary analysis were produced using the Joint Committee staff's Macroeconomic Equilibrium Growth ("MEG") model to simulate the macroeconomic effects of the bill.² This analysis is presented relative to the 2015 economic and receipts baseline ("present law"), published by the Congressional Budget Office ("CBO") in January, 2015.³

The bill amends section 168(k) of the Internal Revenue Code to extend permanently "bonus depreciation," a first-year depreciation deduction equal to 50 percent of the adjusted basis of qualified property, generally effective for property placed in service after December 31, 2014. The bill also provides that a corporation eligible for bonus depreciation may elect to claim additional Alternative Minimum Tax ("AMT") credits in lieu of claiming the additional depreciation. This bill is projected to reduce the after-tax cost of capital, thus providing an incentive for additional savings and investment. Within the budget window, the primary effect of the bill on the economy is a projected increase in the stock of capital of about 0.4 percent during the first half of the budget period (2016-2019) and about 1.2 percent in the second half of the budget period (2020-2025). This increase in the capital stock is projected to result in an increase in Gross Domestic Product ("GDP") of about 0.2 percent during the budget period, and in receipts of about 0.1 percent during that period. These changes in investment are projected to be mirrored by small changes in hours worked and wages. The effects on wages increase over time, as the build-up of capital stock increases worker productivity. Because the size of these effects depends on how strongly investors respond to the incentives, and to a lesser extent for this proposal, on the actions of the Federal Reserve Board, the exact magnitude of these effects is subject to some uncertainty. In the longer run, increasing Federal debts is expected to reduce the investment incentives provided by the proposal.

² A detailed description of the MEG model and its behavioral parameters may be found in: Joint Committee on Taxation, *Macroeconomic Analysis of Various Proposals to Provide \$500 Billion in Tax Relief*, (JCX-4-05), March 1, 2005, and Joint Committee on Taxation, *Overview of the Work of the Staff of the Joint Committee on Taxation to Model the Macroeconomic Effects of Proposed Tax Legislation to Comply with House Rule XIII.3(h)(2)*, (JCX-105-03), December 22, 2003.

³ Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2015-2025*, January 26, 2015.

II. BUDGETARY EFFECTS

Fiscal Years 2016-2025

The growth generated by the increase in capital stock is projected to reduce the revenue loss from the proposal by about \$30.7 billion over the 2016-2025 budget period. This revenue “feedback” begins slowly as it takes time for the effects of increasing capital stock to affect economic growth. At the same time, an increase in interest rates generated by the increase in Federal debt is expected to increase the cost of Federal debt service by about \$17 billion over the budget window. Because the bill is projected to have a very small effect on employment and consumption, it is projected to have a negligible effect on other outlays. Overall, the budgetary effects of changes in economic growth are projected to reduce the deficit by \$13.7 billion during the budget window. Details of the estimate appear on Table 1, on the next page.

Second and Third Decade Effects

In the second and third decades after enactment, because the bill is expected to result in continuing increases in Federal debt, it is expected to make private borrowing more expensive, reducing investment incentives, and thus reducing the rate of increase in capital stock, GDP, and associated revenues relative to those effects within the budget period. The extent to which this crowding out of private investment incentives could eventually lead to the macroeconomic effects of the proposal reducing revenues relative to the conventional estimate is too uncertain to enable a prediction on the sign of the macroeconomic revenue feedback effects in the second or third decades after enactment and beyond.

- TABLE 1 -
ESTIMATED BUDGET EFFECTS OF H.R. 2510,
A BILL TO MODIFY AND MAKE PERMANENT BONUS DEPRECIATION,
AS REPORTED BY THE COMMITTEE ON WAYS AND MEANS

Fiscal Years 2016 - 2025

[Millions of Dollars]

Provision	Effective	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2016-20	2016-25
Modify and Make Permanent Bonus Depreciation	[1]	-97,532	-43,362	-33,977	-26,345	-20,657	-16,827	-12,043	-9,731	-9,878	-10,307	-221,872	-280,659
Additional Effects Resulting from Macroeconomic Analysis [2] [3].....		943	531	77	143	282	701	1,313	2,148	3,168	4,402	1,977	13,709
NET TOTAL		-96,589	-42,831	-33,900	-26,202	-20,375	-16,126	-10,730	-7,583	-6,710	-5,905	-219,895	-266,950

↳ Joint Committee on Taxation

NOTE: Details may not add to totals due to rounding.

- [1] Additional first-year depreciation for 50% of basis of qualified property made permanent is effective for property placed in service after December 31, 2014, in taxable years ending after such date. Election to accelerate AMT credits in lieu of bonus depreciation expanded and made permanent is effective for taxable years ending after December 31, 2014. Special rules for certain plants bearing fruits and nuts is effective for specified plants planted or grafted after December 31, 2014.
- [2] Estimate includes the following effects on outlays due to increased interest rates on the Federal debt.....
- | | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>2016-20</u> | <u>2016-25</u> |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|----------------|
| interest rates on the Federal debt..... | 1,221 | 1,987 | 2,238 | 2,273 | 2,218 | 2,064 | 1,798 | 1,492 | 1,119 | 616 | 9,937 | 17,025 |
- [3] Estimate includes the following off-budget effects.....
- | | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>2016-20</u> | <u>2016-25</u> |
|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|----------------|
| effects..... | 767 | 1,744 | 1,804 | 1,717 | 1,854 | 1,789 | 1,969 | 2,311 | 2,416 | 2,518 | 7,886 | 18,890 |

III. DATA, MODELS, AND ASSUMPTIONS USED IN THE ANALYSIS

The Joint Committee staff analyzed the proposal using the Joint Committee staff MEG model. While the MEG model is based on economic data from the National Income and Product Accounts, taxable income is adjusted to reflect taxable income as measured by reporting on tax returns. The MEG model is based on the standard, neoclassical assumption that the amount of output is determined by the availability of labor and capital, and in the long run demand for labor and capital equals the amount supplied by households. Individuals are assumed to make decisions based on observed characteristics of the economy, including wages, prices, interest rates, tax rates, and government spending levels. Individuals in the MEG model do not anticipate future changes in the economy or government finances; thus, this type of model is often referred to as a “myopic” behavior model.

Monetary policy conducted by the Federal Reserve Board is explicitly modeled, with lagged price adjustments allowing for the economy to be temporarily out of equilibrium in response to fiscal and monetary policy changes. Under an “Aggressive Fed” policy, it is assumed that the Federal Reserve Board would work to counteract any demand incentives resulting from fiscal policy. “Neutral Fed” policy simulations assume that the Federal Reserve Board targets a fixed monetary growth rate, and does not try to counteract fiscal policy. The macroeconomic revenue effects provided in the estimate were generated using the assumption that the Federal Reserve Board would be neutral toward the policy in the beginning of the budget period, consistent with current Federal Reserve policy, and gradually begin to counteract the expansionary effects of growing deficits over the budget period.

Savings and investment decisions respond to an expected after-tax rate of return on investment. The rate of tax depreciation affects this return by affecting the net present value of deductions. Labor supply decisions are modeled separately for four groups: low income primary earners, low income secondary earners, other primary earners, and other secondary earners. The simulation used for this estimate includes the savings parameters and high substitution elasticity parameters for labor supply as reported in Table 2, below.

Information about the effects of the proposal on individual and business average tax rates and effective marginal tax rates, and on after-tax returns to capital and labor is obtained from various Joint Committee staff tax models⁴ (used in the production of conventional revenue estimates) to characterize the effects of the bill within the MEG model. Changes in deductions, credits and exclusions can impact effective marginal tax rates as well as average tax rates. Table 2 provides a summary of key behavioral parameters in the MEG model.

⁴ Descriptions of the JCT conventional estimating models may be found in JCX-46-11, *Testimony of the Staff of the Joint Committee on Taxation before the House Committee on Ways and Means Regarding Economic Modeling*, September 21, 2011, JCX-75-15, *Estimating Changes in the Federal Individual Income tax: Description of the Individual Tax Model*, April 24, 2015, and other documents at www.jct.gov under “Estimating Methodology.”

Table 2.–Key Parameter Assumptions in the MEG Model

Labor supply elasticities in disaggregated labor supply	Income	High Elasticity Substitution	Low Elasticity Substitution
Low income primary	-0.1	0.2	0.15
Other primary	-0.1	0.1	0.1
Low income secondary	-0.3	0.8	0.4
Other secondary	-0.2	0.6	0.3
Wage-weighted population average with baseline rates	-0.1	0.2	0.1
Savings/consumption parameters			
Rate of time preference		0.015	
Intertemporal elasticity of substitution		0.35	
Derived long-run savings elasticity to the after tax rate of return on capital		0.25	