BONUS DEPRECIATION MODIFIED AND MADE PERMANENT

JULY 3, 2014.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. CAMP, from the Committee on Ways and Means, submitted the following

R E P O R T

together with

DISSENTING VIEWS

[To accompany H.R. 4718]

[Including cost estimate of the Congressional Budget Office]

The Committee on Ways and Means, to whom was referred the bill (H.R. 4718) to amend the Internal Revenue Code of 1986 to modify and make permanent bonus depreciation, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

CONTENTS

D. MACROECONOMIC IMPACT ANALYSIS

In compliance with clause 3(h)(2) of rule XIII of the Rules of the House of Representatives, the staff of the Joint Committee on Taxation provides the following analysis of H.R. 4718, as ordered reported by the Committee on Ways and Means on May 29, 2014.

Overview

The following discussion analyzes the macroeconomic effects of this bill relative to the 2014 economic and receipts baseline published by the Congressional Budget Office ("CBO") in February, 2014.[44] We analyzed the bill using the Joint Committee staff macroeconomic equilibrium growth model ("MEG"), and an overlapping generations model ("OLG").[45] The proposal increases the expected after-tax return on investment in targeted depreciable property by allowing firms to deduct a larger share of their capital expenditures in the year of their purchase, relative to present law. This increase in after-tax returns on investment in business equipment and certain other depreciable property is expected to provide an incentive for an increase in savings and investment, resulting in an increase in business capital stock and the overall size of the economy, as measured by gross domestic product ("GDP"). Estimates of the extent of these effects depend on various modeling assumptions described below.

Discussion of proposal and modeling approach

The following analysis was performed using the Joint Committee on Taxation staff's MEG model and an OLG model. Both models start with the standard, neoclassical assumption that the amount of output is determined by the availability of labor and capital, and that in the long run aggregate demand equals aggregate supply. Individuals are assumed to make decisions based on observed characteristics of the economy, including wages, prices, interest rates, tax rates, and government spending levels. Of particular relevance to this bill, firms' investment decisions are based on the expected after-tax rate of return from the investment.

The bill would permanently extend a provision that allows businesses to deduct 50 percent of their investment in equipment (and a small, targeted subset of real property) in the year in which the equipment or property is placed in service, and depreciate the balance over the longer periods of time that apply to the full amount under present law. The effect of this incentive on the after-tax return on capital is modeled within both the MEG and OLG models by comparing the net present value of tax depreciation under the bill with that under present law. This change is calculated using the Joint Committee on Taxation staff's depreciation model, which models deduction patterns for each category of depreciable capital specified under the present law Modified Accelerated Cost Recovery System ("MACRS"), and can be configured to model any change in that pattern under proposed legislation. The effect of the bill on

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[44] Congressional Budget Office, *The Budget and Economic Outlook: 2014–2024*, February 4, 2014.

[45] 1ADescriptions of these models may be found in Joint Committee on Taxation, *Summary of Economic Models and Estimating Practices of the Staff of the Joint Committee on Taxation* (JCX–46–11), September 19, 2011. The OLG model is leased from Tax Policy Advisors, LLC. Key behavioral parameters are provided in an appendix to the current document.

business tax revenues is simulated in both models by reducing average tax rates on businesses.

In the MEG 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. The MEG model is used to examine the importance of different assumptions about Federal Reserve policy. Under the "Aggressive Fed" policy, it is assumed that the Federal Reserve Board works to counteract any demand incentives resulting from fiscal policy. Because for this proposal the policy results in an incentive for people to increase their rate of savings, thus reducing their rate of consumption, the aggressive Fed simulation reduces interest rates to counter negative aggregate demand effects. It is not clear how effective such a policy would be in the context of an economy with interest rates already hovering near zero. The "Neutral Fed" simulations assume that the Federal Reserve Board targets a fixed monetary growth rate, and does not try to counteract fiscal policy.

The MEG model is also used to present results using differing assumptions about the responsiveness of savings and investment to changes in the after-tax rate of return to capital. The "default savings elasticity" simulations use savings responsiveness parameters that are consistent with the median range of measured response levels from empirical studies. The "high savings elasticity" simulations increase savings responsiveness by about 15 percent.

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. This feature of the MEG model allows the simulation of tax and government expenditure policy that may result in an unsustainable growth path. Specifically, policies that result in the Federal debt increasing, or decreasing at a faster rate than the growth of GDP, can be modeled.

In the OLG model, individuals are assumed to make consumption and labor supply decisions to maximize their lifetime well-being given the resources they can foresee will be available to them. They are assumed to have complete information, or "perfect foresight," about economic conditions, such as wages, prices, interest rates, tax rates, and government spending, over their lifetimes. Economic decisions are modeled separately for each of 55 adult-age cohorts. Firms' investment decisions respond to the effects of tax policy on the expected future value of the firm. Changes in marginal tax rates on firm profits, and changes in the value of deductions for investment affect this future valuation.

One important difference between the MEG and OLG models is their treatment of Federal fiscal policy. In the MEG model, it is possible to simulate structural Federal budget deficits as forecast in the CBO baseline, and to allow for increases or decreases in the deficit in simulating proposals. In contrast, the OLG model cannot simulate either the present law fiscal baseline or policy proposals that incorporate unsustainable Federal budget deficits or surpluses. Thus, in the OLG model there is no equilibrium solution when Federal budget conditions appear unsustainable in the long run. It is necessary to create counterfactual stable ratios of debt to GDP within both the baseline and policy simulations of the OLG model.

The bill is projected to increase deficits by decreasing business tax payments. Fiscal balance is achieved in the OLG simulations by reducing transfer payments enough to maintain a stable debt to GDP path. We present two variations of this assumption. In the "concurrent fiscal balance" simulation, transfer payments are modified each year. In the "delayed fiscal balance" simulation, the tax changes are debt-financed within the 10–year budget window, after which transfer payments are decreased to restore a stable debt to GDP path.

Macroeconomic analysis

The ability to expense, rather than depreciate investment expenses reduces the cost to firms of making these investments, thus reducing their after-tax cost of capital and providing an incentive for increased investment.[46] Some research on the effects of expensing on business investment has confirmed that investment increases when more generous expensing policy is in effect.[47] Other research has raised questions about the efficacy of expensing as opposed to investment tax credits in encouraging investment in light of the fact that investment tax credits produce a more favorable picture in firm financial statements. However, such studies still find an overall positive effect of increased expensing on investment.[48]

The Joint Committee on Taxation staff estimates that approximately 40 percent of investments made under present law could potentially be eligible for the 50–percent expensing treatment provided for in this bill. However, not all businesses making eligible investments will be able to take full advantage of this benefit.[49] Thus, the bill is expected to provide a modest incentive for an increase in investment, which is expected to result in a small increase in GDP.

Following is a series of tables that show the effects of this proposal on real (inflation adjusted) gross domestic product, receipts, capital stock, employment, and consumption. Results from each policy simulation for each variable are presented as percentage changes from the levels forecasted under the present-law baseline for the variables in each of Tables 1 through 8 below.

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[46] Economic theory of the effects of "cost of capital" on investment was first formalized by Dale Jorgenson in 1963 "Capital Theory and Investment Behavior," *American Economic Review*, 54, pp. 247–59. Jorgenson, along with Robert Hall added effects of taxation, particularly depreciation policy to this framework in "Tax Policy and Investment Behavior," *American Economic Review*, 57(3), pp 391–414 in 1967. Many macroeconomic simulation models, including the Joint Committee on Taxation staff Macroeconomic Equilibrium Growth model, use this framework to model investment decisions.

[47] See, for example, Bond, Stephen, and Jing Xin, "Corporate Taxation and Capital Accumulation," *Oxford University Centre for Business Taxation Working Paper*, Said Business School, Oxford, UK, 2010.

[48] See, for example, Edgerton, Jesse, "Investment, Accounting, and the Salience of the Corporate Income Tax," *Finance and Discussion Series*, Division of Research and Statistics and Monetary Affairs, Federal Reserve Board, Washington, D.C., March 21, 2011.

[49] For taxpayers carrying forward a loss or claiming a loss in the current year, the present value of bonus depreciation associated with equipment placed in service in the current year is diminished. Similarly, the value of claiming the alternative minimum tax credit provided by the bill as an alternative to bonus depreciation will depend on the taxpayer's particular situation.

1. Effects on real gross domestic product and receipts

TABLE 1.—PERCENT CHANGE IN REAL GDP RELATIVE TO PRESENT LAW

		Fiscal Years 2015–2019	Fiscal Years 2020–2024	Fiscal Years 2015–2024
MEG:				
Default Savings Elasticity	Aggressive Fed	0.1%	0.2%	0.2%
	Neutral Fed	0.1%	0.2%	0.2%
High Savings Elasticity	Aggressive Fed	0.1%	0.3%	0.2%
	Neutral Fed	0.1%	0.2%	0.2%
OLG:				
Concurrent fiscal balance	....	0.1%	0.3%	0.2%
Delayed fiscal balance	....	0.1%	0.3%	0.2%

TABLE 2.—PERCENT CHANGE IN RECEIPTS DUE TO CHANGES IN GDP

		Fiscal Years 2015–2019	Fiscal Years 2020–2024	Fiscal Years 2015–2024
MEG:				
Default Savings Elasticity	Aggressive Fed	− 0.1%	0.1%	(1)
	Neutral Fed	− 0.1%	0.1%	(1)
High Savings Elasticity	Aggressive Fed	− 0.1%	0.1%	(1)
	Neutral Fed	− 0.1%	0.1%	(2)
OLG:				
Concurrent fiscal balance	....	(1)	(1)	(1)
Delayed fiscal balance	....	(1)	(1)	(1)

(1) Indicates an increase of less than 0.05 percent.
(2) Indicates a decrease of less than 0.05 percent.

Table 1 shows the predicted effects of this policy on real gross domestic product, relative to what is projected under present law. Table 2 shows the predicted effects of these output changes on receipts. Relative to present law, real GDP is predicted to increase in the first half of the budget period, by about 0.1 percent, and to increase GDP by 0.2 to 0.3 percent during the second five years of the budget period, overall increasing GDP on average by about 0.2 percent over the ten-year budget period. Among the MEG simulations, the higher predicted increase in the second-five-years is generated by the simulation that combines a higher responsiveness of savings to the after-tax rate of return with an aggressive Fed response. The higher savings responsiveness, while it leads to a bigger investment response, necessarily also leads to a decrease in the rate of consumption, which can reduce aggregate demand in the economy if there are unemployed resources. The aggressive Fed response assumes that the Fed would act to counter that reduction in demand.

The OLG simulations also predict an increase in GDP of 0.3 percent for the second half of the budget period. In the OLG simulations, the reduction in transfer payments that provides the fiscal balance for the revenue loss generated by this proposal provides some additional incentive for individuals to increase savings and investment.

The simulations show that the projected increase in GDP also results in a small projected increase in Federal revenues of up to 0.1 percent of present law receipts in the second half of the budget period, but overall of less than 0.05 percent over the budget period. The change in receipts due to the economic growth projected under the bill is projected to be smaller than the change in GDP, even negative over the ten-year budget period under one simulation as-

sumption. This receipts pattern is driven by the interaction of the specific tax change under the bill with the type of economic activity generated by the bill. That is, by increasing the deductibility of (mostly) equipment expenditures, the bill provides an incentive for more investment in equipment. This is expected to lead to an increase in productive capital stock that will, over time, generate additional growth capacity in the economy. Additional income generated by these responses can be expected to build slowly. At the same time, the increase in deductible purchases may result in a net reduction in the tax base. This effect is apparent in the MEG simulations, which project a reduction in receipts due to the induced investment in the first half of the budget period.

In the following sections on capital stock, employment, and consumption effects, the influence of these proposals on each of these components of growth and the economy can be seen in more detail.

2. Effects on the capital stock

Tables 3 and 4, respectively, show the projected effects of the bill on business and housing capital stock. As discussed above, by increasing the after-tax rate of return for qualified capital—primarily equipment—the bill provides an incentive for increased investment in that capital. As shown in Table 3, this is projected to result in an increase in business capital stock relative to present law of up to 1.4 percent during the 2020–2024 period, and up to 1.0 percent on average over the ten-year budget period. In the MEG simulations, the size of the projected increase depends on how sensitive the savings response is to the incentive, and on whether the Fed acts to offset reduced consumption that results from the savings response.

Structures are not eligible for the 50-percent expensing provided in the bill. Therefore, the bill provides an incentive for some substitution away from investment in housing toward investment in business capital. Table 4 shows that the bill is projected to result in a 0.1 percent decrease in owner-occupied and rental housing units, referred to as "housing stock."

TABLE 3.—PERCENT CHANGE IN REAL BUSINESS CAPITAL RELATIVE TO PRESENT LAW

		Fiscal Years 2015–2019	Fiscal Years 2020–2024	Fiscal Years 2015–2024
MEG:				
Default Savings Elasticity	Aggressive Fed	0.4%	0.8%	0.6%
	Neutral Fed	0.4%	0.8%	0.6%
High Savings Elasticity	Aggressive Fed	0.5%	1.0%	0.8%
	Neutral Fed	0.4%	0.9%	0.7%
OLG:				
Concurrent fiscal balance		0.5%	1.4%	1.0%
Delayed fiscal balance		0.5%	1.4%	0.9%

TABLE 4.—PERCENT CHANGE IN REAL RESIDENTIAL CAPITAL RELATIVE TO PRESENT LAW

		Fiscal Years 2015–2019	Fiscal Years 2020–2024	Fiscal Years 2015–2024
MEG:				
Default Savings Elasticity	Aggressive Fed	−0.1%	−0.1%	−0.1%
	Neutral Fed	−0.1%	−0.1%	−0.1%
High Savings Elasticity	Aggressive Fed	−0.1%	−0.1%	−0.1%
	Neutral Fed	−0.1%	−0.1%	−0.1%

TABLE 4.—PERCENT CHANGE IN REAL RESIDENTIAL CAPITAL RELATIVE TO PRESENT LAW—
Continued

		Fiscal Years 2015–2019	Fiscal Years 2020–2024	Fiscal Years 2015–2024
OLG:				
Concurrent fiscal balance		− 0.1%	− 0.1%	− 0.1%
Delayed fiscal balance		− 0.1%	− 0.1%	− 0.1%

3. Effects on private sector employment

The increase in business capital generated by the bill can be expected, over time, to generate an increase in demand for labor by increasing productivity and wage rates. Because the projected changes in capital stock are relatively modest, these induced effects on labor force participation and employment are also projected to be modest—less than 0.05 percent, as illustrated in Table 6.

TABLE 6.—PERCENT CHANGE IN LABOR FORCE PARTICIPATION RELATIVE TO PRESENT LAW

		Fiscal Years 2015–2019	Fiscal Years 2020–2024	Fiscal Years 2015–2024
MEG:				
Default Savings Elasticity	Aggressive Fed	(1)	(1)	(1)
	Neutral Fed	(1)	(1)	(1)
High Savings Elasticity	Aggressive Fed	(1)	(1)	(1)
	Neutral Fed	(1)	(1)	(1)
OLG:				
Concurrent fiscal balance		(1)	(1)	(1)
Delayed fiscal balance		(1)	(1)	(1)

(1) Indicates an increase of less than 0.05 percent

TABLE 7.—PERCENT CHANGE IN PRIVATE SECTOR EMPLOYMENT RELATIVE TO PRESENT LAW

		Fiscal Years 2015–2019	Fiscal Years 2020–2024	Fiscal Years 2015–2024
MEG:				
Default Savings Elasticity	Aggressive Fed	(1)	(1)	(1)
	Neutral Fed	(1)	(1)	(1)
High Savings Elasticity	Aggressive Fed	(1)	(1)	(1)
	Neutral Fed	(2)	(2)	(2)
OLG:				
Concurrent fiscal balance		(1)	(1)	(1)
Delayed fiscal balance		(1)	(1)	(1)

(1) Indicates an increase of less than 0.05 percent
(2) Indicates a decrease of less than 0.05 percent

Table 7 shows changes in employment predicted to result from the proposal. While the willingness of people to work at a given combination of wage rates and taxes on wages is an important component of total employment, changes in employment are also influenced by the amount of business demand for labor. In the OLG model, which does not model less than full employment of resources, labor supply and employment effects are equivalent. In the MEG model, which allows for less than full employment, they can be different. Thus, in the MEG simulation that combines a higher savings/lower consumption rate with a neutral Fed that does not act to counteract the reduced consumption effect, employment is projected to decline by a small amount relative to present law.

4. Effects on consumption

Table 8 shows how the proposal affects consumption relative to present law. In addition to the interaction between consumption demand and short-term economic growth, consumption is often of interest as an indicator of individuals' well-being. Generally, increased growth facilitates more consumption. Because this bill is projected to increase growth by providing an incentive for people to increase savings and investment, which will lead to an increase in the business capital stock, the effect of the bill on consumption is expected to change over time. For a given level of income, an increase in the savings rate is equivalent to a decrease in the rate of consumption. In the first half of the budget period, the negative effect of the increase in savings on consumption is projected to outweigh the positive effect from income generated by investment, leading to a modest decline in consumption. As additions to the business capital stock accumulate over time, the accompanying increase in income is projected to lead to a net increase in consumption, by about 0.1 percent relative to present law on average over the second half of the budget period. This effect occurs more quickly in the MEG model simulations than in the OLG simulations, as evidenced by a projected positive effect on average over the whole budget period in most of the MEG simulations, in contrast with a small net negative effect on average over the ten years in the OLG simulations.

TABLE 8.—PERCENT CHANGE IN CONSUMPTION RELATIVE TO PRESENT LAW

		Fiscal Years 2015–2019	Fiscal Years 2020–2024	Fiscal Years 2015–2024
MEG:				
Default Savings Elasticity	Aggressive Fed	(2)	0.1%	0.1%
	Neutral Fed	(2)	0.1%	0.1%
High Savings Elasticity.				
	Aggressive Fed	(2)	0.1%	0.1%
	Neutral Fed	−0.1%	0.1%	(1)
OLG:				
Concurrent fiscal balance		−0.1%	0.1%	(2)
Delayed fiscal balance		−0.1%	0.1%	(2)

(1) Indicates an increase of less than 0.05 percent
(2) Indicates a decrease of less than 0.05 percent

Conclusion

The 50-percent expensing of certain investment expenditures provided for in this bill increases the after-tax rate of return for investment in qualified expenditures, providing an incentive for increased investment in qualified capital. It also provides an incentive for some substitution away from housing investment toward qualified investment—mostly business equipment. Thus, the bill is expected to result in a small increase in business capital stock, and in GDP, relative to present law.

Appendix—key parameter assumptions

The amount of taxpayer response to changes in tax policy is governed by how sensitive their work, consumption, and savings decisions are to changes in the after-tax rate of return to additional work or investment and to changes in their disposable income. Tables A–1 and A–2 below show the parameters used to model the

degree of responsiveness for the MEG and OLG models respectively.

Table A.1.—PARAMETER ASSUMPTIONS IN THE MEG MODEL

Labor supply elasticities in disaggregated labor supply	Income	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 average baseline rates	−0.1	0.2	0.1
Savings/consumption parameters underlying lifecycle consumption function			
Rate of time preference	0.015	....	....
Intertemporal elasticity of substitution-default	0.35	....	....
Derived long-run savings elasticity to the after-tax rate of return on capital—			
default	0.25	....	....
Intertemporal elasticity of substitution-high	0.45	....	....
Derived long-run savings elasticity to the after-tax rate of return on capital—			
high	0.29	....	....

TABLE A.2.—PARAMETER ASSUMPTIONS IN THE OLG MODEL

Description	Value
Time preference	0.015
Intertemporal elasticity of substitution	0.4
Intratemporal elasticity of substitution between consumption and leisure	0.6
Leisure share of time endowment	0.4
Population growth rate	0.01
Technological growth rate	0.016
Capital share non-housing	0.25
Capital share housing	0.975
Adjustment cost (quadratic function)	5

V. OTHER MATTERS TO BE DISCUSSED UNDER THE RULES OF THE HOUSE

A. COMMITTEE OVERSIGHT FINDINGS AND RECOMMENDATIONS

With respect to clause 3(c)(1) of rule XIII of the Rules of the House of Representatives (relating to oversight findings), the Committee advises that it was as a result of the Committee's review of the provisions of H.R. 4718 that the Committee concluded that it is appropriate to report the bill, as amended, favorably to the House of Representatives with the recommendation that the bill do pass.

B. STATEMENT OF GENERAL PERFORMANCE GOALS AND OBJECTIVES

With respect to clause 3(c)(4) of rule XIII of the Rules of the House of Representatives, the Committee advises that the bill contains no measure that authorizes funding, so no statement of general performance goals and objectives for which any measure authorizes funding is required.

C. INFORMATION RELATING TO UNFUNDED MANDATES

This information is provided in accordance with section 423 of the Unfunded Mandates Reform Act of 1995 (Pub. L. No. 104–4).