

## ANALYSIS

---

### Prepared by

Mark Zandi  
[Mark.Zandi@moodys.com](mailto:Mark.Zandi@moodys.com)  
Chief Economist

### Contact Us

Email  
[help@economy.com](mailto:help@economy.com)

U.S./Canada  
+1.866.275.3266

EMEA  
+44.20.7772.5454 (London)  
+420.224.222.929 (Prague)

Asia/Pacific  
+852.3551.3077

All Others  
+1.610.235.5299

Web  
[www.economy.com](http://www.economy.com)  
[www.moodysanalytics.com](http://www.moodysanalytics.com)

# Economic and Fiscal Impact of House and Senate Tax Legislation

## Introduction

Efforts to cut taxes and reform the tax code are in full swing. Both the House and Senate have passed their versions of tax legislation and have begun work to resolve the differences between them. This testimony assesses the impact of both tax proposals on the economy and the federal government's fiscal situation over the next decade. If either plan were to become law as proposed, neither would materially increase long-run economic growth, but both would add significantly to the government's deficits and debt load.

# Economic and Fiscal Impact of House and Senate Tax Legislation

BY MARK ZANDI

**E**fforts to cut taxes and reform the tax code are in full swing. Both the House and Senate have passed their versions of tax legislation and have begun work to resolve the differences between them. This testimony assesses the impact of both tax proposals on the economy and the federal government's fiscal situation over the next decade. If either plan were to become law as proposed, neither would materially increase long-run economic growth, but both would add significantly to the government's deficits and debt load.

## Businesses win big

Both the House and Senate are proposing large tax cuts, with both plans targeting 10-year static deficits—ignoring the impact of the tax cuts on the economy and thus tax revenues—of well over \$1.4 trillion, or more than 7% of current GDP. Businesses are the biggest beneficiaries under both tax plans. Of the more than \$1.4 trillion price tag, over \$1 trillion goes to businesses in the House plan and closer to \$800 billion in the Senate plan (see Table 1).<sup>1</sup>

Breaking this down further, the House plan would give corporations a net tax cut of almost \$500 billion over 10 years on a static basis. Smaller pass-through entities—businesses whose owners pay personal income tax on their companies' earnings—would see a tax cut of about \$600 billion. The Senate plan would reduce corporate taxes by a smaller near \$450 billion, as it delays the reduction in the top corporate marginal rate by a year, and gives pass-throughs a \$350 billion cut.

Large multinationals would benefit substantially under both plans by a move from the current global taxation system—the corporations' worldwide earnings are taxed at the U.S. rate—to a territorial one—the corporations' U.S. earnings are taxed at the U.S. rate and there is a lower tax on overseas

earnings. They will also enjoy a onetime tax holiday on the trillions in earnings they now hold overseas to avoid the current high tax rate. However, the House plan is somewhat less friendly to multinationals in that it imposes an excise tax on payments made by U.S. companies to their foreign subsidiaries.

The biggest corporate tax expense in the plans is the proposed reduction in the top marginal rate from 35% to 20%.<sup>2</sup> Lowering the top tax rate on pass-through income and allowing businesses to reduce their tax bill by fully expensing their investment for at least five years are also costly. To help pay for this largess, various business-related tax loopholes are eliminated or scaled back, and the deductibility of interest payments made by businesses are partially limited.

## Individual winners and losers

Tax breaks for individuals are more modest, amounting to a near \$400 billion under the House plan over 10 years on a static basis and \$700 billion under the Senate plan. The big winners are taxpayers in the top 5%, with current incomes well over \$300,000 per year, whose after-tax income increases by more than 2% in 2018 and a near 1.5% by 2027.<sup>3</sup> Low-income taxpayers in the bottom 60%, with current incomes of less than \$86,000, get a 1% tax cut in 2018, and es-

entially no tax cut by 2027. Middle-income taxpayers receive a tax cut of approximately 1.5% in 2018 and less than 0.5% by 2027.

The biggest individual tax expenses are the proposal to reduce marginal rates and significantly increase the standard deduction and child tax credit. The House would eliminate the estate tax and alternative minimum tax—a boon to wealthy households—while the Senate would be less generous by phasing out the tax cuts beginning in 2026, scaling back the AMT, and only increasing the amount of wealth exempted from the estate tax. To help pay for all this, both the House and Senate plans would repeal or scale back itemized deductions except for mortgage interest, investment interest, charitable contributions, and up to \$10,000 in real property taxes.

## Stronger growth?

Proponents of the tax legislation argue that it will significantly increase economic growth. The most common refrain is that the tax cuts will lift real GDP growth closer to 3% per annum from the roughly 2% that has prevailed during the current expansion. They also argue that this additional growth will generate roughly enough additional tax revenue for the plan to pay for itself. That is, there would be large so-called supply-side

**Table 1: Comparison of House Ways and Means and Senate Finance Committee Tax Plans**

Static cost from 2018 to 2027, \$ bil

Senate Finance Committee Tax Plan		House Ways and Means Tax Plan	
<b>Net Cost</b>	<b>(1,447)</b>	<b>Net Cost</b>	<b>(1,437)</b>
Personal Income Tax	(682)	Personal Income Tax	(367)
10%, 12%, 22.5%, 25%, 32.5, 35% and 38.5% income tax rate brackets (sunsets 12/31/25); Alternative inflation measure	(1,040)	12%, 25%, 35%, and 39.6% income tax rates with phase-out of 12% income tax bracket for taxpayers with taxable income above \$1 million (\$1.2 million for joint filers); Alternative inflation measure	(961)
Increase the individual AMT exemption amounts and phase-out thresholds (sunsets 12/31/25)	(636)	Repeal of Alternative Minimum Tax on Individuals	(696)
Modify standard deduction (\$12,000 for singles, \$24,000 for married filing jointly, \$18,000 for HoH) (sunsets 12/31/25)	(737)	Modify standard deduction (\$12,200 for singles, \$24,400 for married filing jointly, \$18,300 for HoH; index for inflation for years beginning after 2019)	(921)
Modification of child tax credit (\$1,650 not indexed; refundable up to \$1,000 indexed up to nearest \$100 base year 2017; \$2,500 refundability threshold not indexed; \$500 other dependents not indexed; phase outs \$500,000/\$1 million not indexed; increase eligibility to less than 18 years old); Valid Social Security Number Requirements (sunsets 12/31/25)	(556)	\$1,600 child credit not indexed; refundable up to \$1,000 indexed up to nearest \$100 base year 2017; \$300 non-refundable personal credit for all other individuals receiving present-law personal and dependent exemptions (not indexed, sunsets 12/31/22); Increase in phase-out threshold of child credit and application of phase-out to personal credits (\$115k/\$230k, indexed)	(640)
Repeal of itemized deductions for taxes not paid or accrued in a trade or business (except for up to \$10,000 in state and local real property taxes), interest on home equity debt, non-disaster casualty losses, tax preparation expenses, and certain miscellaneous expenses (sunsets 12/31/25)	829	Repeal of itemized deductions except mortgage interest, investment interest, charitable contributions, up to \$10,000 in real property taxes, and certain miscellaneous expenses	1,261
Repeal of deduction for personal exemptions (sunsets 12/31/25)	1,221	Repeal of deduction for personal exemptions	1,562
Other personal revenue raisers	320	Other personal revenue raisers	178
Double Estate, Gift and GST Tax Exemption Amount (sunset 12/31/25)	(83)	Double Estate, Gift, and GST Tax Exemption Amount; After 2024 Repeal Estate and GST Taxes and Reduce Gift Tax Rate to 35%	(151)
<b>Corporate Income Tax</b>	<b>(772)</b>	<b>Corporate Income Tax</b>	<b>(1,072)</b>
20% corporate tax rate in 2019 and thereafter	(1,329)	Reduction in Corporate Tax Rate to 20%	(1,456)
Reinstate Alternative Minimum Tax on Corporations	-	Repeal of Alternative Minimum Tax on Corporations	(40)
Allow 23% deduction of certain domestic non-service pass-through income of individuals, capped at 50% of taxpayer's share of total wages paid by the business. Exceptions (1) allow the deduction for service pass-through income for individuals below taxable income threshold. Threshold is taxable income below \$500,000 for joint filers. \$250,000 for all other individuals, phased out over next \$100,000 for joint filers and \$50,000 for all others; provides special rules for qualified REIT and cooperative dividends, specific agricultural or horticultural cooperatives, and publicly traded partnerships (sunsets 12/31/25). Disallow active pass-through losses in excess of \$500,000 for joint filers, \$250,000 for all others (sunsets 12/31/25)	(340)	25% pass-through tax rate with lower rate for small passthrough entities	(597)
Increase Section 179 expensing to \$1 million with a phase-out range beginning at \$2.5 million and expand definition of qualified property; Simplified accounting for small business; Extension, expansion, and phase down of bonus depreciation (sunset 12/31/26)	(149)	Provide Section 168(k) Expensing for Qualified Investments (sunset 12/31/22); Increase Section 179 expensing to \$5 million with a phase-out beginning at \$20 million (sunset 12/31/22) and expand to include qualified energy efficient heating and air-conditioning property; Small business accounting method reform and simplification	(66)
Corporate base broadeners	784	Corporate base broadeners	809
"Treatment of deferred foreign income upon transition to participation exemption system of taxation and mandatory inclusion at two-tier rate (7.5-percent rate for illiquid assets, 14.5-percent rate for liquid assets)"	298	Treatment of deferred foreign income upon transition to participation exemption system of taxation and deemed repatriation at two-tier rate (14-percent rate for liquid assets, 7-percent rate for illiquid assets)	293
Base erosion and anti-abuse tax	140	Prevention of Base Erosion	196
Other International Tax Changes	(176)	Other International Tax Changes	(211)
Treatment of tax-exempt organizations	6.9	Treatment of tax-exempt organizations	3

Sources: JCT, Moody's Analytics

effects from the tax cuts. So large that on a dynamic basis—after accounting for the bigger economy—the plan will not add to the nation's deficits and debt.

They are wrong on both counts. Neither the House nor Senate plans will meaningfully improve economic growth, at least not on a sustained basis. Growth would be stronger initially since the deficit-financed tax cuts are fiscal stimulus. But given that the economy is operating at full employment, stronger inflation and higher interest rates will result. The economic benefit of the lower tax rates

on business investment is washed out by the higher interest rates, and the economy ends up no bigger than it would have been without the tax cuts.

This is evident in simulations of the Moody's Analytics macro model, which is similar to models used by the Federal Reserve, Congressional Budget Office, and the Joint Committee on Taxation—the official budget scorer of tax legislation.<sup>4</sup> Under the House plan, real GDP growth is 30 basis points higher in 2018, adding close to half a million jobs, and pushing unemployment

below 4% (see Table 2).<sup>5</sup> Since this is well below the full-employment unemployment rate, which the Federal Reserve and Moody's Analytics currently estimate to be 4.5%, the Fed responds by tightening monetary policy more aggressively. Long-term interest rates also increase due to the monetary tightening and to investor expectations of larger future budget deficits.<sup>6</sup> While lower corporate tax rates by themselves would incent more business investment due to the resulting lower *after-tax* cost of capital, the higher interest rates largely wash this out by increasing the

**Table 2: Difference Between House Tax Plan and Current Law**

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Avg annual growth 2017-2022 2017-2027	
Real GDP (2009\$ bil)	50.9	48.6	10.0	73.2	122.4	39.7	62.1	76.7	84.5	68.7	0.13	0.03
% change	0.30	-0.02	-0.22	0.35	0.26	-0.45	0.11	0.07	0.03	-0.08		
Employment (mil)	0.368	0.462	0.076	0.501	0.970	0.376	0.440	0.580	0.644	0.535	0.13	0.03
% change	0.25	0.06	-0.26	0.28	0.31	-0.40	0.04	0.09	0.04	-0.07		
Real Median Household Income (2009\$ ths)	60.9	95.7	80.2	148.1	192.5	110.2	115.6	127.0	128.2	108.1	0.07	0.02
% change	0.12	0.07	-0.03	0.13	0.08	-0.16	0.01	0.02	0.00	-0.04		
Consumer Price Index (1980-82=100)	0.0	0.1	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.01	0.02
% change	0.01	0.02	-0.02	-0.02	0.04	0.03	0.03	0.03	0.04	0.04		
S&P 500 Stock Index	154.2	140.0	113.6	106.2	104.4	57.3	50.9	60.4	68.9	69.6	0.73	0.19
% change	6.40	-0.23	-1.41	-0.82	-0.41	-1.79	-0.31	0.20	0.15	-0.07		
FHFA House Price Index	-5.4	-17.9	-18.9	-18.0	-17.3	-15.9	-14.5	-13.2	-12.1	-11.4	-0.79	-0.22
% change	-1.35	-3.00	-0.18	0.33	0.29	0.44	0.43	0.37	0.30	0.21		
Unemployment Rate (%)	-0.21	-0.26	-0.03	-0.26	-0.53	-0.19	-0.20	-0.28	-0.31	-0.23	<b>Averages</b>	
											-0.26	-0.25
Federal Funds Rate (%)	0.04	0.09	0.10	0.06	0.18	0.24	0.22	0.22	0.24	0.25	0.09	0.16
10-Year Treasury Yield (%)	0.11	0.32	0.44	0.49	0.54	0.60	0.64	0.64	0.64	0.66	0.38	0.51
Federal Government Debt (\$ bil)	43.9	212.4	471.2	712.9	899.0	1,050.2	1,154.9	1,247.4	1,383.1	1,569.3		
Debt-to-GDP Ratio (%)	0.01	0.83	2.20	2.87	3.23	4.01	4.14	4.23	4.48	4.99		
Federal Budget Deficit (\$ bil)	-86.3	-194.0	-223.7	-185.1	-147.6	-128.7	-80.0	-114.4	-149.3	-200.9	<b>Cumulative Sum</b>	
											-837	-1510
Deficit-to-GDP Ratio (%)	-0.41	-0.90	-1.02	-0.79	-0.59	-0.50	-0.29	-0.40	-0.51	-0.67		
Government Interest Payments - Federal (\$ bil)	1.64	9.73	21.55	33.47	47.42	58.40	66.62	75.55	84.00	91.71		
Interest-to-GDP Ratio (%)	0.00	0.04	0.10	0.14	0.18	0.23	0.24	0.26	0.28	0.30		

Sources: BEA, BLS, S&P, FHFA, Treasury, Moody's Analytics

cost of capital.<sup>7</sup> In the end, the economic lift from the tax cuts is small, adding an estimated 3 basis points per annum to real GDP growth over the next decade. The tax plan does not increase growth from 2% to 3%, as the proponents argue, but from 2.00% to 2.03%.

The economic impact of the Senate plan is similar; real GDP growth is less than 20 basis points stronger in 2018, but almost 30 basis points stronger in 2019, since that is when the lower corporate tax rates take effect (see Table 3). Growth under the Senate

plan is a bit slower in the longer run than the House plan, as it phases out the individual tax cuts, adding only 2 basis points per annum to real GDP growth over the next decade.

#### Higher stock prices, lower house prices

The House and Senate tax reform plans will lift stock prices, but reduce house prices. Stock prices receive a lift given the higher *after-tax* earnings of large publicly traded companies, although this is partially offset by the impact of the higher interest rates

on the price multiple that investors are willing to put on those earnings. Accounting for these crosscurrents, and the uncertainty with regard to whether the lower tax rates will be permanent after the 10-year budget horizon, the tax plans should lift stock prices by between 10% and 15%.

Much of the increase in stock prices has already occurred as investors are increasingly discounting some probability of tax cuts soon becoming law. This probability appeared to rise sharply immediately after last year's presidential election, when stock

**Table 3: Difference Between Senate Tax Plan and Current Law**

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Avg annual growth	
											2017-2022	2017-2027
Real GDP (2009\$ bil)	29.0	74.1	47.7	80.9	125.1	59.0	108.8	104.4	75.4	33.1	0.13	0.02
% change	0.16	0.25	-0.15	0.18	0.23	-0.36	0.25	-0.03	-0.15	-0.21		
Employment (mil)	0.203	0.626	0.406	0.596	0.997	0.513	0.795	0.827	0.607	0.288	0.13	0.02
% change	0.13	0.28	-0.15	0.13	0.26	-0.32	0.18	0.02	-0.14	-0.21		
Real Median Household Income (2009\$ ths)	46.6	105.8	109.5	153.6	193.1	124.3	153.3	143.3	97.3	38.6	0.07	0.01
% change	0.09	0.11	0.01	0.08	0.07	-0.13	0.05	-0.02	-0.09	-0.11		
Consumer Price Index (1980-82=100)	0.0	0.1	0.1	0.1	0.2	0.3	0.5	0.7	0.8	1.0	0.02	0.03
% change	0.00	0.03	0.01	0.01	0.05	0.04	0.05	0.05	0.06	0.04		
S&P 500 Stock Index	109.3	115.7	112.1	100.1	94.5	69.5	76.2	65.2	34.0	17.1	0.41	-0.08
% change	3.29	0.49	-0.41	-1.00	-0.52	-1.04	0.08	-0.45	-0.97	-0.51		
FHFA House Price Index	-3.9	-13.9	-15.0	-14.1	-13.4	-11.7	-9.6	-7.3	-5.1	-3.5	-0.60	-0.07
% change	-0.95	-2.39	-0.20	0.29	0.26	0.47	0.55	0.55	0.48	0.33		
											<b>Averages</b>	
Unemployment Rate (%)	-0.12	-0.36	-0.23	-0.32	-0.54	-0.26	-0.39	-0.41	-0.28	-0.09	-0.31	-0.30
Federal Funds Rate (%)	0.01	0.09	0.17	0.17	0.25	0.29	0.30	0.32	0.33	0.28	0.14	0.22
10-Year Treasury Yield (%)	0.11	0.31	0.45	0.55	0.61	0.63	0.62	0.62	0.62	0.61	0.41	0.51
Federal Government Debt (\$ bil)	-7.4	111.9	369.0	630.0	834.9	1,036.1	1,229.1	1,393.7	1,513.7	1,549.7		
Debt-to-GDP Ratio (%)	-0.15	0.23	1.52	2.43	2.91	3.82	4.14	4.55	4.88	4.99		
											<b>Cumulative Sum</b>	
Federal Budget Deficit (\$ bil)	-14.3	-176.5	-233.3	-201.0	-164.7	-193.2	-153.7	-153.0	-83.3	-22.3	-790	-1395
Deficit-to-GDP Ratio (%)	-0.06	-0.81	-1.05	-0.86	-0.65	-0.75	-0.56	-0.53	-0.27	-0.06		
Government Interest Payments - Federal (\$ bil)	0.57	7.28	20.60	34.43	49.30	61.34	71.98	83.44	91.51	93.96		
Interest-to-GDP Ratio (%)	0.00	0.02	0.09	0.14	0.18	0.23	0.25	0.28	0.31	0.31		

Sources: BEA, BLS, S&P, FHFA, Treasury, Moody's Analytics

prices increased significantly, especially for tax-sensitive companies. Investors seemed to be much less sure this summer as Republican attempts to repeal Obamacare failed. At the current time, investors are attaching a high probability to tax cuts. Therefore, if the House or Senate tax plans actually become law in the next few weeks, the additional bump to stock prices should be modest.

House prices suffer under both the House and Senate plans. The tax law changes significantly reduce the value of the mortgage interest deduction, or MID, and property tax deductions, which are capitalized in current house prices. In particular, both plans reduce the value of the MID by doubling the standard deduction and thus significantly reducing the number of households that itemize and take advantage of the MID. They also limit the deduction for property taxes up to \$10,000, while the House goes further by roughly halving the amount of mortgage debt on which taxpayers can deduct interest. Also, the higher mortgage rates that result from the higher budget deficits and debt under the plans weaken housing demand.

Considering all of this, the hit to national house prices under the House plan is estimated to be near 4% at the peak of their impact in summer 2019 and closer to 3% under the Senate plan. That is, national house prices will be approximately 3% to 4% lower than they would have been if there were no tax legislation. The impact on house prices is much greater for higher-priced homes, especially in parts of the country where incomes are higher and there are thus a disproportionate number of itemizers, and where homeowners have big mortgages and property tax bills.<sup>8</sup> The Northeast Corridor, South Florida, big midwestern cities, and the West Coast will suffer the biggest price declines (see Chart 1). Counties such as Essex NJ, Westchester NY, Cook IL, and Delaware PA could see house prices reduced by as much as 10% compared with what they would have been otherwise.

The impact on the broader national economy of the higher stock prices and lower house prices is largely a wash. The principal channel through which changing asset prices impact growth is on consumer spending via

the wealth effect—the change in spending due to a change in wealth. Stock wealth rises somewhat more than housing wealth declines due to the tax law changes, but the housing wealth effect is currently a bit larger than the stock wealth effect.<sup>9</sup>

### Big dynamic deficits

The House and Senate tax plans will significantly exacerbate the nation's fiscal problems. On a static basis, the tax plans will cost taxpayers more than \$1.4 trillion over the next decade. On a dynamic basis, the price tag is not much lower. While there are economic benefits on revenues from the lower marginal rates, they are not sufficient to pay for the cuts. Government borrowing thus increases, causing interest payments on the accumulating debt to rise. The added interest payments offset the economic benefits on revenues, making the static and dynamic budget deficit and debt load about the same.

Under both plans, the government's debt-to-GDP ratio rises from just over 75% today to almost 100% a decade from now, measured on either a static or a dynamic basis. By comparison, with no changes to tax policy, the debt-to-GDP ratio still would rise significantly, but only to 95%. Neither prospect is an attractive one, but a tax plan that adds significantly to the government's debt load is bad policy.

### Pluses and minuses

There are aspects of the tax plans that are difficult to model and quantify: Some add to economic growth, and others detract from it, but on net these largely cancel each other out. Moving from a global to a territorial system will stop inversions by U.S.-based multinationals, ensuring more headquarters stay here. Limiting the deductibility of interest payments would also curb businesses' use of debt in financing their activi-

ties. Given the nation's experience with too much leverage, and the already-high levels of debt at nonfinancial corporations, this would be a plus.

The most significant unquantifiable drawback of the plans is that they will very likely sunset in 10 years. Under Senate rules, tax and spending legislation that passes using the reconciliation process, in which only a simple majority of votes is required, must be deficit neutral by the last year of the 10-year budget horizon. If the JCT-scored legislation shows that there will be a deficit a decade from now, then all of the provisions in that legislation expire. This is very likely the fate of the Republican tax plan. Uncertainty over how future lawmakers would deal with this tax cliff will likely crimp business investment, particularly longer-lived, riskier types of investment, as the cliff comes into view.

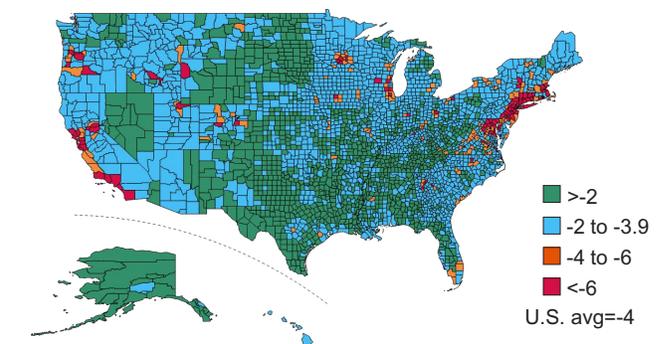
Making the tax code simpler, and thus more transparent and efficient, would be an economic plus. However, it is unclear that the tax plan accomplishes this. Scaling back the number of individual tax brackets and eliminating various loopholes will streamline the tax code. But reducing the top tax rate on pass-through income to below the top personal tax rate means higher-income individuals likely will try to pass themselves off as pass-through entities. Curtailing such gaming will complicate the code.

### Bad timing

It is particularly bad timing for deficit-financed tax cuts. This is evident when considering the economic and fiscal backdrop

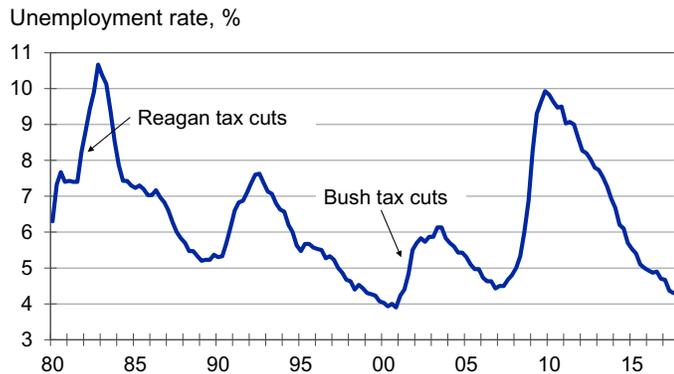
## Chart 1: House Prices Are Hit Under Tax Plans

% change in FHFA HPI due to House tax plan



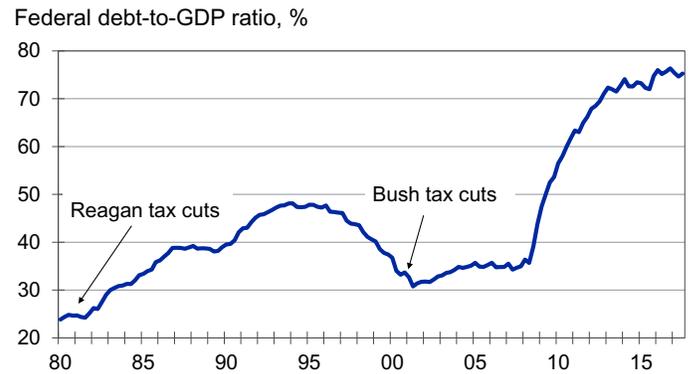
Sources: IRS, Moody's Analytics

**Chart 2: Unemployment Is Much Lower Today...**



Sources: BLS, Moody's Analytics

**Chart 3: ...And Fiscal Situation Much Worse**



Sources: BEA, Moody's Analytics

during the last two major tax cuts—the Reagan cuts of the early 1980s and the Bush tax cuts of 2001. Those cuts were bigger than what the House and Senate currently have planned—about 12% of GDP—but they became law when the economy was struggling and the fiscal situation substantially better than today.

The early 1980s were a time of serious economic stress, with rampant double-digit unemployment. The bursting of the stock market bubble and 9/11 pushed the economy into recession in 2001. Unemployment today is near 4%, and even with no tax cuts, is widely expected to fall below 4% in coming months, consistent with the lowest unemployment rates in the nation's history (see Chart 2). Most businesses are already complaining that they cannot find qualified workers to fill their record number of open job positions. Inflation is still low, but policymakers at the Federal Reserve believe it is set to accelerate even without a push from a deficit-financed tax cut.

The government's finances were also much better prior to the Reagan and Bush tax cuts (see Chart 3). Tax revenues as a share of GDP were close to a record 19% of GDP, compared with 17% today. Indeed, revenues have averaged almost precisely 17% over the past half century. It is thus difficult to argue that collectively we are over-taxed, at least not by any historical standard. Debt loads were also much lower prior to past tax cuts—25% of GDP under Reagan and just over 30% under Bush. This compares to over 75% today. Perhaps even more importantly,

**Table 4: Well-Designed, Paid-For Tax Reform Reaps Economic Benefits**

*Impact on the level of output, %*

Source	Policy Change	Short-Run	Long-Run
Gravelle, CRS (2014)	20% Reduction in Income Tax Rates	Not Reported	0.7 - 4.0
JCT (2014)	Camp Plan	0.1 - 1.6	Not Reported
Treasury (2006)	President's Advisory Panel on Tax Reform		
	Simplified Income Tax	0.0-0.4	0.2-0.9
	Growth and Investment Tax	0.1-1.9	1.4-4.8
	Progressive Consumption Tax	0.2-2.3	1.9-6.0
JCT (2006)	20% Cut in Federal Corporate Tax Rate		
	Not Financed	0.2-0.4	0.0-0.3
	Financed With Future Spending Cuts	0.2-0.4	0.5-0.9
Altig et al. (2001)	Revenue-Neutral Tax Reform	0.5	1.9
	Flat Tax With Transition Relief		

Note: Output measure is (in order of preference if multiple measures are reported) national income, real gross national product, and real gross domestic product. Time period for short-run effects varies across studies, but (in most cases) is an average over several years in the first decade. Long-run effects typically reflect estimates of the change in the steady state level of output.

Sources: Jason Furman, Moody's Analytics

the concern back in the early 2000s was that the country would be running government surpluses and there would be a lack of Treasury securities to trade.<sup>10</sup> Today, the fiscal outlook is dark even without a deficit-financed tax cut.<sup>11</sup>

**Well-designed tax reform**

None of this is to say that policymakers should not pass a well-designed tax reform plan. Tax reform that lowers marginal rates, particularly for businesses, but is paid for and does not add to the government's deficits

and debt load will result in stronger sustainable economic growth. This is the clear message in the best recent research from the JCT, Congressional Research Service, and academia (see Table 4).

Perhaps the most relevant research is the JCT 2005 study that considered a 20% cut in the federal corporate tax rate under the assumption that the cut was deficit-financed, and also assuming that it was paid for by cuts to government spending. In the long run, consistent with a 10-year budget horizon, a paid-for corporate tax rate cut

lifts real GDP by almost 1%, but a deficit-financed tax cut by only 0.3%. This is very consistent with our model's results, which show that real GDP is 0.3% higher under the House plan a decade from now, and 0.4% under the Senate plan.

Even under the best designed tax plans, including those that involve more fundamental changes to the tax code such as adopting a progressive consumption tax, the lift to GDP in the long run is still relatively modest, at least compared with the expectations of those who strongly advocate for tax cuts to support long-term economic growth. According to a 2006 study by the Treasury, the progressive consumption tax lifts real GDP by 6% in the long run, or approximately 0.6% per annum. Paid-for, well-designed tax cuts are a plus for the economy, but they are not a magic elixir.

### Regional economic impacts

The economic impacts of the tax plans vary across the country. Looking at the impact of the Senate plan on state economic performances, as measured by real GDP growth over the next decade, the state economies that benefit most are largely in the South, with Alabama and the Carolinas the biggest winners (see Chart 4). The industrial Midwest, including Indiana and Michigan, Kentucky and Tennessee also fare relatively well, as do the Rocky Mountain states of Colorado and Utah.

State and regional economies that do not benefit or actually suffer due to the tax cuts over the next decade are concentrated in the Northeast, particularly the New York City region. California's economy, along with sundry states in the agricultural Midwest and northern Rockies, also sees no benefits. These states combined account for about half the nation's real GDP.

Behind the differences in economic performance across states are the distributional impacts of the changes to the individual tax code, the impact of the elimination of the state and local income and sales tax deductions and scaling back of the property tax deduction, and the different impacts on house prices across the country. The Northeast also suffers from stronger net out-migration since the region is more costly to live and work in, while the South's economy benefits from those Northeasterners who move to the lower-cost South.

### Conclusion

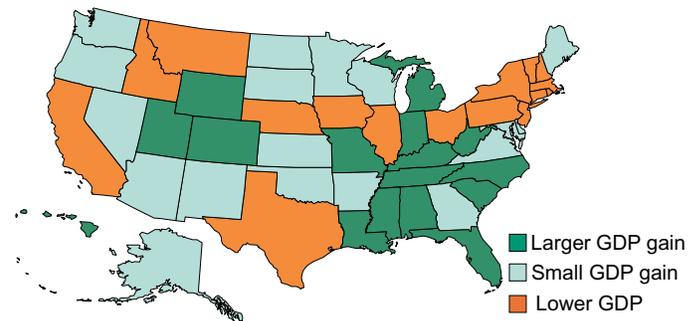
The tax cuts the Trump administration and Republican Congress appear set on rush-

ing into law are bad policy. They *will not* meaningfully help the economy, they *will* add significantly to the nation's debt, they *will not* make the tax code simpler, they *will* be a boon to multinationals and very wealthy households, and they could not be more poorly timed.

The economic outlook depends in good measure on what happens, or does not happen, in Washington DC in the next few weeks around tax reform. If tax reform efforts fail, it will be an opportunity lost, but it will be better than passing large deficit-financed tax cuts as proposed in the House and Senate tax plans. Good tax reform is very difficult to do, and the tax reform proposals policy-makers are currently considering do not get it done.

## Chart 4: Who Wins and Loses in Senate Plan

Change in real GDP growth over the next decade due to tax plan



Sources: BEA, JCT, IRS, Moody's Analytics

## Endnotes

- 1 The static budget scores of the [House](#) and [Senate](#) plans are available from the Joint Committee on Taxation.
- 2 A good rule of thumb is that every 1 percentage point change in the top marginal corporate tax rate reduces tax revenues by approximately \$120 billion over 10 years on a static basis, and closer to \$100 billion on a dynamic basis.
- 3 These are the distributional impacts of the [House](#) plan as estimated by the Tax Policy Center. The Joint Committee on Taxation has also estimated the distributional impacts for both the [House](#) and [Senate](#) plans.
- 4 A white paper describing the Moody's Analytics macroeconomic model is available upon request.
- 5 Real median household incomes are close to \$110 higher by 2027 under the House plan and \$125 higher under the Senate plan. This is well below that implied in a study by the Council of Economic Advisors of the relationship between corporate tax rates and wages. One key reason for this is that the CEA study does not consider how lower corporate tax rates are paid for.
- 6 For every 1 percentage point increase in the nation's publicly traded debt-to-GDP ratio, 10-year Treasury yields increase in the Moody's Analytics model by an estimated 4 basis points. Given that the House and Senate plans add 5 percentage points to the debt-to-GDP ratio on a static basis, 10-year yields rise by 20 basis points, all else being equal. The elasticity of 10-year Treasury yields to the stock of Treasury debt estimated by the [Federal Reserve](#) in the context of its quantitative easing policy is closer to 6 basis points.
- 7 The business investment equations in the Moody's Analytics macro model are based on neoclassical investment theory in which investment is determined by an accelerator—the change in the growth in demand—and the cost of capital.
- 8 Prices for lower-priced homes in some parts of the country, particularly in more rural and exurban areas where incomes are lower and itemizing by taxpayers less commonplace, should rise modestly if the tax reform plans become law.
- 9 This is shown in a forthcoming paper, "Weighing the Wealth Effects," Mark Zandi, Brian Poi and Scott Hoyt, that is available upon request.
- 10 Then-Federal Reserve Chairman Alan Greenspan made this point in 2001 [Congressional testimony](#).
- 11 This is clear in the Congressional Budget Office's most recent long-term [budget outlook](#).

## About the Author

Mark Zandi is chief economist of Moody's Analytics, where he directs economic research. Moody's Analytics, a subsidiary of Moody's Corp., is a leading provider of economic research, data and analytical tools. Dr. Zandi is a cofounder of the company Economy.com, which Moody's purchased in 2005.

Dr. Zandi's broad research interests encompass macroeconomics, financial markets and public policy. His recent research has focused on mortgage finance reform and the determinants of mortgage foreclosure and personal bankruptcy. He has analyzed the economic impact of various tax and government spending policies and assessed the appropriate monetary policy response to bubbles in asset markets.

A trusted adviser to policymakers and an influential source of economic analysis for businesses, journalists and the public, Dr. Zandi frequently testifies before Congress on topics including the economic outlook, the nation's daunting fiscal challenges, the merits of fiscal stimulus, financial regulatory reform, and foreclosure mitigation.

Dr. Zandi conducts regular briefings on the economy for corporate boards, trade associations and policymakers at all levels. He is on the board of directors of MGIC, the nation's largest private mortgage insurance company, and The Reinvestment Fund, a large CDFI that makes investments in disadvantaged neighborhoods. He is often quoted in national and global publications and interviewed by major news media outlets, and is a frequent guest on CNBC, NPR, Meet the Press, CNN, and various other national networks and news programs.

## About Moody's Analytics

Moody's Analytics helps capital markets and credit risk management professionals worldwide respond to an evolving marketplace with confidence. With its team of economists, the company offers unique tools and best practices for measuring and managing risk through expertise and experience in credit analysis, economic research, and financial risk management. By offering leading-edge software and advisory services, as well as the proprietary credit research produced by Moody's Investors Service, Moody's Analytics integrates and customizes its offerings to address specific business challenges.

Concise and timely economic research by Moody's Analytics supports firms and policymakers in strategic planning, product and sales forecasting, credit risk and sensitivity management, and investment research. Our economic research publications provide in-depth analysis of the global economy, including the U.S. and all of its state and metropolitan areas, all European countries and their subnational areas, Asia, and the Americas. We track and forecast economic growth and cover specialized topics such as labor markets, housing, consumer spending and credit, output and income, mortgage activity, demographics, central bank behavior, and prices. We also provide real-time monitoring of macroeconomic indicators and analysis on timely topics such as monetary policy and sovereign risk. Our clients include multinational corporations, governments at all levels, central banks, financial regulators, retailers, mutual funds, financial institutions, utilities, residential and commercial real estate firms, insurance companies, and professional investors.

Moody's Analytics added the economic forecasting firm Economy.com to its portfolio in 2005. This unit is based in West Chester PA, a suburb of Philadelphia, with offices in London, Prague and Sydney. More information is available at [www.economy.com](http://www.economy.com).

Moody's Analytics is a subsidiary of Moody's Corporation (NYSE: MCO). Further information is available at [www.moodyanalytics.com](http://www.moodyanalytics.com).

DISCLAIMER: Moody's Analytics, a unit of Moody's Corporation, provides economic analysis, credit risk data and insight, as well as risk management solutions. Research authored by Moody's Analytics does not reflect the opinions of Moody's Investors Service, the credit rating agency. To avoid confusion, please use the full company name "Moody's Analytics", when citing views from Moody's Analytics.

## About Moody's Corporation

Moody's is an essential component of the global capital markets, providing credit ratings, research, tools and analysis that contribute to transparent and integrated financial markets. **Moody's Corporation** (NYSE: MCO) is the parent company of Moody's Investors Service, which provides credit ratings and research covering debt instruments and securities, and **Moody's Analytics**, which encompasses the growing array of Moody's nonratings businesses, including risk management software for financial institutions, quantitative credit analysis tools, economic research and data services, data and analytical tools for the structured finance market, and training and other professional services. The corporation, which reported revenue of \$3.6 billion in 2016, employs approximately 11,500 people worldwide and maintains a presence in 41 countries.

© 2017 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

**CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.**

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody's.com](http://www.moody's.com) under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.