

November 2012

Fiscal Cliffs and Ceilings

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Abstract

With the election over and President Obama set for a second term, pressure is building on lawmakers to address Washington's approaching fiscal cliff and the Treasury's statutory debt limit. Unless the president and House Republicans agree to change current law, the U.S. economy will be in recession by the spring. Even more important, policymakers must find a path to fiscal sustainability, making long-term tax and spending changes that will narrow the federal budget deficit enough to stabilize the nation's debt-to-GDP ratio. These challenges will determine how the economy performs for years to come.

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With the election over and President Obama set for a second term, pressure is building on lawmakers to address Washington's approaching fiscal cliff and the Treasury's statutory debt limit. Unless the president and House Republicans agree to change current law, the U.S. economy will be in recession by the spring. Even more important, policymakers must find a path to fiscal sustainability, making long-term tax and spending changes that will narrow the federal budget deficit enough to stabilize the nation's debt-to-GDP ratio. These challenges will determine how the economy performs for years to come.

Policymakers have a number of options. The least likely is to do nothing after the economy hits the January 1 fiscal cliff. This scenario has only a 5% probability.¹ The tax hikes and spending cuts scheduled to take effect at the beginning of 2013 would precipitate a new economic downturn, which would likely be severe, as households and businesses panic and pull back. The Federal Reserve would attempt to mitigate the damage with quantitative easing, but this would be insufficient. Fiscal sustainability would ultimately be achieved, but at a great cost.

Lawmakers are more likely (40% probability) to kick the can down the road by extending current policy, deferring significant tax increases and spending cuts. This option would also be very costly, because it would signal that political will is lacking to put the nation on a sustainable fiscal path. The U.S. Treasury would lose its Aaa rating, adding to the uncertainty and doubt that already hang over business decisions and weigh on economic growth.

The most likely outcome (55% probability) is an agreement that significantly reduces the scale of the fiscal cliff, raises the Treasury debt ceiling and credibly promises long-term fiscal sustainability. Such an agreement will not be achieved easily, and the political battle likely to precede it may be damaging, particularly if it extends far into 2013. But compromise is economi-

cally possible, and the political stars seem aligned to allow it as well. If lawmakers can come to terms, the economy's prospects will quickly brighten.

Policy uncertainty

Much work remains, and concern about Washington's ability to manage the developing crisis already appears to be taking a toll. Nervous businesses have pulled back sharply on investment in recent months (See Chart 1). This may partly reflect decisions by owners of S corporations expecting higher personal tax rates next year. Since their business profits are taxed as personal income, it makes economic sense for them to push investment from this year into next.

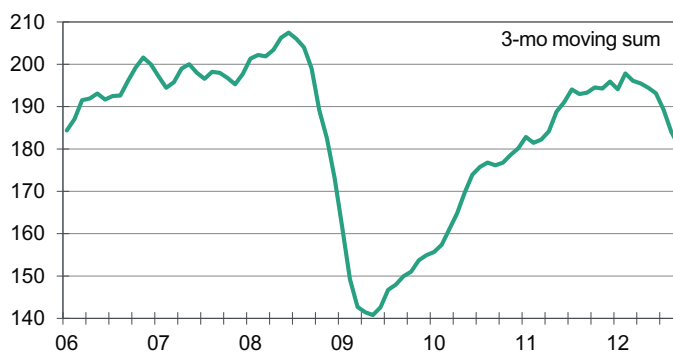
More important, perhaps, is that businesses are simply unsure what lawmakers will do. Business planners cannot construct a plausible narrative of how the president and House Republicans will address fiscal issues. Managers also know that if lawmakers botch the job, the economy will

fall back into recession. Unable to handicap such a possibility, businesses feel safer postponing risky investments.

Curiously, businesses have not significantly altered their hiring and layoff plans. But after slashing payrolls and significantly increasing productivity during the Great Recession, firms know they cannot do so again. Additional job cuts would reduce output. CEOs also know that it costs less to delay a major equipment purchase than to halt hiring or lay off workers. Consumers also seem unfazed by the drama in Washington, perhaps because the job market has stabilized, gasoline prices have fallen, and house prices have begun to rise. Consumer confidence is as strong as it has been since before the Great Recession. Yet it is hard to see how

Chart 1: Nervous Businesses Pull Back

Orders for nondefense capital goods ex aircraft, \$ bil



Sources: Census Bureau, Moody's Analytics

Table 1:

Sizing Up the 2013 Fiscal Cliff

If all tax and spending changes slated for 2013 happen as currently planned, here is how it will affect the federal deficit and the economy.

Fiscal Policy	The federal deficit will shrink...	...but so will U.S. GDP		Implied Multiplier
	\$ bil	\$ bil	% of GDP	
Bush-era tax cut (below \$250k income)	-198	-174	-1.06	0.88
Personal income	-171	-147	-0.90	0.86
Stimulus, EITC, CTC, AOTC	-27	-27	-0.17	1.00
AMT patch	-120	-59	-0.36	0.49
Payroll tax holiday	-115	-100	-0.60	0.87
Automatic spending cuts (sequestration)	-100	-105	-0.64	1.05
Defense cuts	-50	-54	-0.33	1.08
Nondefense cuts	-50	-51	-0.31	1.02
Bush-era tax cut (above \$250k income)	-83	-40	-0.24	0.48
Personal income, PEP and Pease	-44	-31	-0.19	0.70
Capital gains & dividend income	-8	-5	-0.03	0.60
Estate tax	-31	-4	-0.03	0.14
Emergency unemployment insurance	-36	-51	-0.35	1.42
Affordable Care Act (Obamacare)	-23	-11	-0.06	0.48
Medicare doc fix	-20	-8	-0.06	0.40
Tax extenders	-20	-4	-0.02	0.20
Bonus depreciation	-12	-3	-0.01	0.25
Total	-727	-555		0.76
% of GDP	-4.4	-3.4		

Notes:

The difference in the budget deficit is based on a static analysis—it does not include the impact of the changing economy and the reaction of financial markets.

The difference in real GDP is based on a dynamic analysis using the Moody's Analytics macro model—it does include the impact of the changing economy and the reaction of financial markets.

Sources: CBO, OMB, Moody's Analytics

this will last if fiscal uncertainty continues to mount.

Investors will also lose faith eventually. There already are some indications of market nervousness. Stock prices have weakened since the election, credit spreads have widened, and credit default swaps on Treasury bonds have begun to edge higher. Financial markets are more upbeat than they were when Congress battled over the Treasury debt ceiling in summer 2011—but as that period shows, market sentiment is fickle and unpredictable.

Over the cliff

The fiscal cliff is huge. Federal tax increases and spending cuts scheduled to take effect in 2013 total more than \$700 billion, equal to 4.4% of GDP. If lawmakers were to allow all of them to take effect, GDP next year would be nearly 3.4% less than it would be otherwise. (See Table 1).

This would precipitate another recession. Total economic output in 2013 would decline by an estimated 0.3% from 2012, and the unemployment rate would continue to rise through 2014, peaking near double

digits (See Table 2). This is similar to the Congressional Budget Office's estimate of the economic impact of permanently going over the cliff.²

While a 0.3% drop in GDP would be relatively mild as recessions go, the balance of risks to this outlook are tilted sharply to the downside. Most macroeconomic models, including those used by Moody's Analytics and the Congressional Budget Office, do not adequately account for the national mood, which is very fragile. Nervous businesses, investors and households, still feeling the

Table 2:

Real GDP Impact of Different Budget Scenarios

Calendar year 2013

	Real GDP After Going Over the Cliff		Real GDP After Kicking the Can		Real GDP After Going the Speed Limit	
	2005\$ bil	% change	2005\$ bil	% change	2005\$ bil	% change
2012	13,587	2.2	13,587	2.2	13,587	2.2
2013	13,546	-0.3	14,008	3.1	13,859	2.0
2014	13,741	1.4	14,466	3.3	14,405	3.9
2015	14,112	2.7	14,900	3.0	15,005	4.2
2016	14,635	3.7	15,273	2.5	15,519	3.4
2017	15,251	4.2	15,551	1.8	15,931	2.7
2018	15,844	3.9	15,831	1.8	16,314	2.4
2019	16,338	3.1	16,098	1.7	16,669	2.2
2020	16,763	2.6	16,362	1.6	17,038	2.2
2021	17,149	2.3	16,629	1.6	17,413	2.2
2022	17,526	2.2	16,892	1.6	17,789	2.2
Average Annual Growth 2012-2022		2.6		2.2		2.7

fallout from the Great Recession, are likely to recoil more than the models suggest if they have to grapple with much higher taxes and slashed government budgets.

The models also fail to fully pick up the implications that flow from the weakened ability of policymakers to respond to a new recession. Unable to lower interest rates further, the Fed will be forced to undertake even more quantitative easing.³ And by definition, fiscal policymakers would have done nothing to mitigate the downturn.

With so many people out of work, and for a much longer stretch, a more virulent form of hysteresis would set in. Rising numbers of long-term unemployed workers have already raised estimates of the nation's full-employment unemployment rate, from 5% before the Great Recession to almost 6%. More than 40% of the unemployed have not held jobs for six months or longer. A return to recession could add millions more to the long-term jobless rolls and raise the "natural" rate of unemployment still higher.

Some argue that going over the fiscal cliff would solve the government's longer-term sustainability problem. Tax revenues would rise and spending fall, shrinking future

budget deficits enough to stabilize the debt-to-GDP ratio. But this may be true only on paper. If the resulting recession were deep enough to weaken the economy's potential growth rate, fiscal sustainability could become elusive. Over the last two decades, Japan's ratio of government debt to GDP has been the highest in the industrialized world, not because of imprudent fiscal policies, but because of the slowdown in its economic growth.

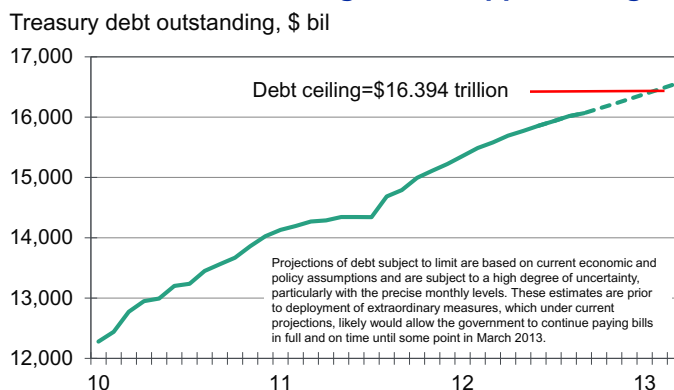
Breaking the ceiling

Adding to the economic threat posed by the fiscal cliff is the approaching Treasury debt ceiling. The law currently caps federal debt at \$16.394 trillion. Based on recent government expenditures and receipts, the Treasury will approach that limit in a few

weeks and be forced to use extraordinary accounting techniques to avoid crossing it (See Chart 2). However, the Treasury can only do this for so long, and by early March the Obama administration will be forced to make some difficult decisions.

The administration could default on the nation's debt, but this would produce financial chaos and is inconceivable. The federal government could stop paying some bills, cut payments to Social Security recipients or Medicare providers, or shut some operations. Some 40% of government spending is fi-

Chart 2: The Debt Ceiling Is Fast Approaching



Sources: Treasury, Moody's Analytics

nanced by borrowing, so the cuts would have to be draconian. This also seems a highly unlikely outcome.

The president's other option would be to ignore the law and order the Treasury to continue issuing debt above the legal ceiling. During the debt-ceiling crisis in 2011, some argued that the president can do this under the 14th amendment to the Constitution. The amendment was passed to deal in part with Civil War debts, but the courts could interpret it more broadly. Regardless, a constitutional crisis would ensue.

Fiscal sustainability

Most worrisome over the long run is whether lawmakers are up to the task of achieving fiscal sustainability. This means shrinking deficits enough, through some combination of higher tax revenues and lower spending, to stabilize the nation's debt-to-GDP ratio. The ratio nearly doubled during the Great Recession, through the automatic stabilizers in the budget and the additional costs of fiscal stimulus measures and the bailouts. Without changes to fiscal policy, the ratio will continue to rise, ultimately precipitating a fiscal crisis.⁴

Under reasonable economic assumptions, policymakers need to reduce deficits by just over \$3 trillion during the next decade to achieve fiscal sustainability. (This is on top of the more than \$1 trillion in spending cuts via caps to discretionary spending agreed to as part of last summer's increase in the Treasury debt ceiling, but not the \$1 trillion in automatic spending cuts known as sequestration agreed to as part of that deal.) Doing so will produce deficits later in the decade that equal less than 3% of GDP. Given expected GDP growth, this will stabilize the debt-to-GDP ratio.

The 2010 Simpson-Bowles commission called for even more deficit reduction. Simpson-Bowles proposed tax revenue increases through tax reform, higher rates on upper-income households and a gasoline tax, and enough cuts to discretionary and entitlement programs to substantially reduce the nation's debt-to-GDP ratio.⁵ This goes beyond simply achieving fiscal sustainability.

The Simpson-Bowles goals are appropriate. Reducing deficits beyond \$3 trillion will

rebuild the fiscal cushion we will almost certainly need to cope with future events such as wars or recessions. Doing so would also help mitigate concerns that policymakers could backtrack on taxes and spending. A more aggressive program of deficit reduction could ensure that rating agencies do not downgrade the nation's debt. The agencies are looking for a plan that ultimately lowers the debt-to-GDP ratio.

Kicking the can

Going permanently over the fiscal cliff or breaking the debt ceiling would have such widespread negative impacts on the economy that it is implausible to think lawmakers will allow it. Congress could avoid the cliff and debt ceiling altogether, extending current tax and spending policy for a few months or even another year, and raise the ceiling high enough to keep the Treasury from hitting it in this period.

Without any fiscal drag, the economy would grow more quickly in 2013, but much more slowly over the long term. (See Table 2). A failure to make any progress toward fiscal sustainability now would signal that lawmakers were incapable of doing so without a serious financial crisis at hand.

When such a crisis might occur is unknowable, but it is instructive that in such a scenario the Moody's Analytics model breaks down in 2028, with interest on the ballooning federal debt swamping the budget and crippling the economy. Yet a crisis would almost surely erupt sooner than that, as global investors would sell off U.S. Treasury debt long before Washington was unable to make interest payments.

Fearful of this outcome, credit rating agencies would likely downgrade U.S. Treasury debt, and also the debt of institutions supported by the federal government, including Fannie Mae and Freddie Mac, the Federal Home Loan Bank system, state and municipal governments, and systemically important financial institutions.⁶ Unlike in 2011, when S&P's decision to cut the nation's rating from AAA to AA caused few financial repercussions, unified action by all the ratings agencies would likely affect financial markets significantly. Money market and

other investment funds that are chartered to hold only top-rated securities could be forced to sell assets en masse, for example.

The cloud of uncertainty, meanwhile, would keep businesses unsure about their tax obligations, future government contracts, and the nation's long-term fiscal situation. The economy would throttle back to a new normal, characterized by much slower long-term growth. Real GDP growth toward the end of this decade would be almost half a percentage point per year slower than otherwise.

Fiscal speed limit

Given these dark prospects and the current political backdrop, lawmakers are more likely to do roughly the right thing: Scale back the fiscal cliff, raise the debt ceiling, and establish a reasonably credible path to fiscal sustainability.

The cliff will be scaled back just enough to ensure that the recovery stays on course next year. Tax hikes and spending cuts together will equal no more than 1.5% of GDP, a level that can be characterized as a fiscal speed limit.⁷ The economy would still face a significant headwind, particularly during the first half of next year, but it would be manageable. The U.S. would avoid another recession, with real GDP growing almost 2%, about the same as this year. It is important to remember that the economic drag from federal, state and local government in 2012 has also been considerable, amounting to 1.3% of GDP.

Changes to tax and spending policy could be combined in various ways to keep the fiscal drag from exceeding 1.5% of GDP. The most likely course would involve letting the 2011-2012 payroll tax holiday expire (adding a fiscal drag equal to 0.6% of GDP), phasing out the emergency unemployment insurance program (0.35% of GDP), allowing the Bush-era tax rates for U.S. households making more than \$250,000 per year to end (0.24%), and allowing taxes to rise on higher-income households to help pay for healthcare reform (0.06%). Together, these changes would create a fiscal drag on the economy in 2013 equal to 1.25% of GDP, safely below the recessionary limit.

Adopting this course would mean lawmakers also extend the Bush-era tax rates for households making less than \$250,000 a year; eliminate spending cuts scheduled under the 2011 sequestration agreement, and extend such “temporary” policies as the inflation adjustment to the alternative minimum tax and Medicare’s reimbursement schedule for doctors and hospitals.

As part of the fiscal-cliff agreement, the debt ceiling could be raised enough to last past the 2014 elections. But this will not happen without the consent of House Republicans, who in summer 2011 used the debt ceiling as a lever to cut the federal budget by \$1 trillion over 10 years through caps on the discretionary spending, and another \$1 trillion through sequestration. House Republicans will happily jettison the sequestration deal’s cuts to the defense budget, but they will insist on others.

To succeed, therefore, an agreement will probably have to involve a broader program of deficit reduction, including reforms to the tax code and entitlements. Doing all this will be impossible in a short period; lawmakers will instead lay out a broad framework and leave it to congressional committees to hash out the details next year. A plausible framework could include \$1.5 trillion in revenue increases over the next decade, half through higher tax rates and half through loophole closing and other reforms.

A deal would also include \$2 trillion in spending cuts, including cuts in Social Security and Medicare.⁸ Including the \$1 trillion in spending cuts agreed to in the 2011 debt-ceiling deal, the ratio of spending cuts to tax increases would be 2-to-1. If lawmakers could pull off something like this, future deficits would be small enough to begin shrinking the U.S. debt-to-GDP ratio by the end of the 10-year budget horizon. This would please financial markets and keep the credit rating agencies at bay.

This is easier said than done, of course. But we appear to be in one of those rare times when the political stars are aligned for extraordinary achievements. It is not so much that this president and Congress will act differently than their predecessors, rather that they will act in unusual circumstances.

Tax rates are going up on everyone unless they act, and no one—particularly not House Republicans—wants that. Neither does anyone want haphazard cuts to the defense and nondefense discretionary budgets. Another factor is the debt ceiling, which gives House Republicans significant leverage, which they have shown a willingness to use. And both President Obama and House Speaker John Boehner are conscious of how history would regard a historic deal that put the U.S. fiscal outlook and economy on track.

To be sure, generating the political will to reach agreement may take into 2013. That means the U.S. may temporarily go over the fiscal cliff. The economy will not suffer significantly right away, particularly if the Treasury can hold off changing tax withholding schedules until a deal is reached. Government agencies could also delay their most draconian budget cuts for a while. However, the economic damage will mount if businesses, investors and consumers begin to doubt policymakers will come to terms. By early February, as the Treasury runs out of options to avoid the debt ceiling, stock prices will slump, bond and CDS spreads will widen, and business and consumer confidence will slide. Political pressure will become intense—but this may be precisely the stress needed to forge a substantive and durable agreement.

Achieving fiscal nirvana

As lawmakers hash out an agreement in the coming weeks, they may want to consider a few suggestions that could meaningfully improve the fiscal and economic outcome.

First, policymakers should not rush to reach a deal before the end of the year, unless it adequately addresses the fiscal cliff, the debt ceiling, and fiscal sustainability. If temporarily going over the cliff is necessary to achieving a good agreement, then lawmakers should not hesitate to do so. As has been appropriately pointed out, the fiscal cliff is really more like a slope. That is, the economy will not crater on January 1 if there is no budget deal in place. Lawmakers have until early February to reach an agreement before investors, businesses and consumers begin to lose faith and the economic costs become severe.

At the same time, any proposal to extend current tax and spending policy for even a few months should be rebuffed. Such a diversion would create policy uncertainty that will ensure the economy remains stuck in slow-growth mode and vulnerable to anything else that might go wrong. There is no guarantee, moreover, that lawmakers will find it easier to come to terms later. If anything, achieving a durable agreement will become more difficult the closer we get to the 2014 elections.

Second, given the still-fragile economy, policymakers should consider scaling back the January tax hikes and spending cuts well below 1.5% of GDP, the level at which a recession becomes likely. If the fiscal drag next year were only 0.6% of GDP, real GDP would grow closer to 3% in 2013. This would be sufficient to push unemployment definitively lower and speed growth enough to make it self-sustaining. The economy would experience a greater amount of fiscal drag in the future, but would be in a better position to handle it.

One way to lower the fiscal drag to 0.6% of GDP is to allow the Bush-era tax cuts for upper-income households to expire, increase taxes to pay for Obamacare and even begin to implement tax reform—say a \$50,000 cap on personal deductions. The 2% payroll tax holiday and the emergency unemployment insurance programs could be extended for another year. Taxes would rise on upper-income households but be unchanged for everyone else, thus cushioning the blow to economic activity.

Third, lawmakers should adopt a deficit reduction plan that both increases tax revenue and cuts spending. Simpson-Bowles proposed a 4-to-1 ratio of spending cuts to revenue increases, but the plan also assumed that the Bush-era tax cuts for upper-income households would end. Moreover, there have been substantial cuts to discretionary spending since the Simpson-Bowles plan was proposed at the end of 2010, including the caps included in the 2011 debt-ceiling deal.⁹ An updated version of Simpson-Bowles would thus propose deficit reduction with a spending-to-revenue ratio closer to 2-to-1, which seems an appropriate goal.

Fourth, to achieve the 2-to-1 ratio, policymakers need to reform entitlements. There is no need to radically change Social Security, Medicare and Medicaid, at least not yet. Privatizing Social Security, voucherizing Medicare, or block-granting Medicaid seem to be steps too far. But these programs do need significant changes to shore up their finances and to buy time to see whether the Affordable Care Act can bend the healthcare cost curve. The tax on high-end health insurance plans, the competition of healthcare exchanges, and the discipline of the Independent Payment Advisory Board may slow the growth of healthcare costs and thus put entitlement programs on firmer ground.

Fifth, tax reform is preferable to higher tax rates.¹⁰ Several approaches would limit deductions and credits in the tax code. Governor Mitt Romney suggested capping them at some dollar amount. President Obama proposed capping the top marginal rate to which deductions can apply. Harvard economist Martin Feldstein would cap them at a percentage of adjusted gross income. Each approach has pluses and minuses, but they all raise significantly more revenue from higher-income households without raising their tax rates.

Given the strong lobbies for each deduction and credit, it seems politically unlikely that caps could raise enough tax revenue to meet the 2-to-1 spending-to-revenue goal. Some tax rate increases will thus be neces-

sary. Moreover, since President Obama campaigned successfully on an explicit promise to allow the Bush-era tax cuts to expire for upper-income households, this seems a reasonable approach.

Finally, to solidify the credibility of their deficit reduction plan, lawmakers should revive the pay-as-you-go rule: Any future proposal to increase spending or lower taxes must be offset in full for by other spending cuts or tax increases. PAYGO has been around for some time but has not been implemented in recent years.

Separately, lawmakers should adopt a version of the so-called dollar-for-dollar rule first proposed by Ohio Senator Rob Portman to address the 2011 debt ceiling. Under Portman's rule, policymakers would agree at the beginning of each fiscal year to cut spending equal to the amount the debt ceiling must be raised to cover that year's budget. The spending cuts would be phased in gradually over the following 10 years. Adopting some form of this rule would be a good safeguard in case Congress misses its deficit reduction target.

Conclusions

The next few months will be trying for the nation's collective psyche and the economy. The political battle between the president and Congress may extend into 2013, with nerve-wracking brinkmanship that causes

businesses to rein in expansion plans even more than they already have. Growth is expected to come to a near standstill early in the new year.

But out of this political cauldron, a substantive budget deal should emerge. Nearly all parties agree that we must address our fiscal problems, and the political stars seemed roughly aligned to do it. The fiscal cliff will be scaled back to a manageable size; the debt ceiling will be raised enough to get past the 2014 elections, and a credible path to fiscal sustainability will be established.

The economy will quickly regain its footing once a deal is struck. By this time next year, the U.S. recovery should be back on track. Real GDP will grow around 2% in 2013, doubling that pace in 2014 and remaining near 4% in 2015. Job growth will accelerate from approximately 2 million jobs per year to a pace closer to 3 million. Unemployment will fall definitively as job creation picks up pace, and the economy will be back to full employment—a jobless rate below 6%—by summer 2016.

But this upbeat forecast will come to pass only if the president and Congress address our fiscal problems in a reasonably graceful way. The beauty of the American political system is that our elections, however contentious, have always shown us the way. Hopefully, the most recent election did the same.

Endnotes

- ¹ The probabilities attached to the various scenarios are subjective and not based on quantitative analysis.
- ² This study can be found at <http://www.cbo.gov/publication/43694>.
- ³ According to the Moody's Analytics model, going over the cliff permanently would cause the Federal Reserve balance sheet to double in size from \$3 trillion to \$6 trillion. The 10-year Treasury bond yield would fall to almost 0.75% through much of 2014.
- ⁴ The direct cost of the policy response to the Great Recession was \$1.8 trillion, including several rounds of fiscal stimulus measures; the bailouts of the banking, auto and housing industries; and the takeovers of Fannie Mae and Freddie Mac. The nation's publicly traded Treasury debt-to-GDP ratio rose from close to 35% in fiscal 2007 to 70% in fiscal 2012.
- ⁵ The Simpson-Bowles plan assumed that personal tax rates for households making more than \$250,000 a year would rise back to their pre-Bush rates.
- ⁶ The rating agencies give a ratings premium to systemically important financial institutions under the assumption that they are too big to fail and will be backstopped by the federal government. A downgrade of Treasury debt would weaken that backstop and therefore reduce the rating premium. This premium is already smaller than it was prior to the passage of Dodd-Frank, suggesting that regulatory reform reduced the too-big-to fail risk, at least in the eyes of the rating agencies.
- ⁷ This fiscal speed limit varies across nations. Smaller, open economies with flexible exchange rates, independent monetary policies and interest rates above the zero bound have higher speed limits. For example, the U.K. has a high fiscal speed limit, while peripheral European countries have lower speed limits. The U.S. is closer to the U.K., even though it is a more closed economy that possesses the globe's reserve currency.
- ⁸ The \$2 trillion in spending cuts also includes approximately \$400 billion in net interest savings from the lower debt load due to the other program spending cuts and higher tax revenues.
- ⁹ The expiration of the Bush-era tax cuts for upper-income households is worth approximately \$1 trillion over 10 years. The caps on discretionary spending that came with the debt-ceiling deal are worth another \$1 trillion. Lawmakers also agreed to nearly \$500 billion in 10-year spending cuts in an April 2011 deal.
- ¹⁰ It is important to note that from an economic perspective, there is no difference between a cut in government spending and a reduction in tax deductions and credits. For example, there is no difference between receiving the mortgage interest deduction via the tax code or via a check from the government.

About the Authors

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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 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 foreclosure mitigation policy 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 often quoted in national and global publications and interviewed by major news media outlets, and is a frequent guest on CNBC, NPR, CNN, Meet the Press, and various other national networks and news programs.

Dr. Zandi is the author of *Financial Shock: A 360° Look at the Subprime Mortgage Implosion*, and *How to Avoid the Next Financial Crisis*, described by the New York Times as the "clearest guide" to the financial crisis. His forthcoming book, *Paying the Price*, provides a road map for meeting the nation's daunting fiscal challenges.

Dr. Zandi earned his BS from the Wharton School of the University of Pennsylvania and his MA and PhD at the University of Pennsylvania. He lives with his wife and three children in the suburbs of Philadelphia.

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