



STATE AND LOCAL GOVERNMENTS' FISCAL OUTLOOK

2014 Update

GAO's State and Local Fiscal Simulations

Fiscal sustainability presents a national challenge shared by all levels of government. Since 2007, GAO has published simulations of long-term fiscal trends in the state and local government sector. These simulations have consistently shown that state and local governments face long-term fiscal pressures. Absent any policy changes, the sector will face an increasing gap between expenditures and receipts in future years. Closing this gap will require state and local governments to make policy changes to assure that receipts are at least equal to expenditures.

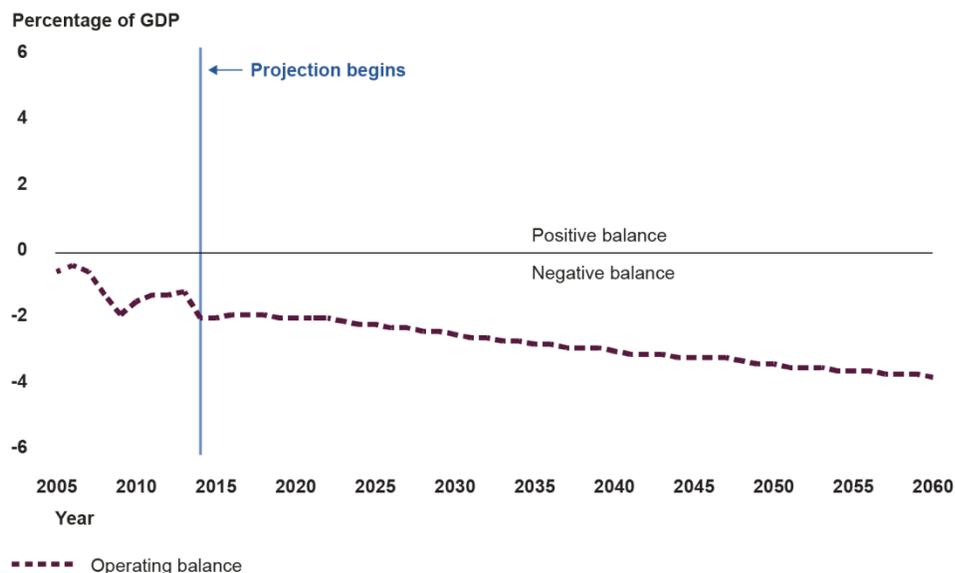
GAO's model uses the Bureau of Economic Analysis's National Income and Product Accounts as the primary data source and presents the results in the aggregate for the state and local sector as a whole. GAO's model shows the level of receipts and expenditures for the sector until 2060 based on current and historical spending and revenue patterns. The model assumes that the current set of policies in place across state and local government remains constant to show a simulated long-term outlook. The model incorporates the Congressional Budget Office's economic projections. These projections capture near-term cyclical swings in the economy. Because the model covers the sector in the aggregate, the fiscal outcomes for individual states and localities cannot be captured. This product is part of a body of work on the nation's long-term fiscal challenges. Related products can be found at

http://www.gao.gov/fiscal_outlook/state_local_fiscal_model/overview#t=2.

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The state and local government sector continues to face fiscal challenges which contribute to the overall fiscal challenges of the nation as a whole. As shown in figure 1, GAO's simulations suggest that the sector could continue to face a gap between revenue and spending during the next 50

Figure 1: State and Local Simulated Operating Balance Measure, as a Percentage of Gross Domestic Product (GDP)



Sources: GAO calculations using Bureau of Economic Analysis data and GAO simulations, updated December 2014. | GAO-15-224SP

Notes: Historical data from 2005 to 2013 are from Bureau of Economic Analysis's (BEA) National Income and Product Accounts (NIPA). GAO's simulations are from 2014 to 2063, using many Congressional Budget Office (CBO) projections and assumptions, particularly for the next 10 years.

The simulated operating balance is a measure of the sector's ability to cover its current expenditures out of current receipts. The simulated operating balance measure is all receipts, excluding funds used for long-term investments, minus current expenditures. To develop this measure, GAO subtracts funds used to finance longer-term projects—such as investments in buildings and roads—from receipts since these funds would not be available to cover current expenses. Similarly, GAO excludes capital-related expenditures from spending. While most states have requirements related to balancing their budgets, deficits can arise because of unanticipated events such as recessions. These deficits can occur because the planned annual revenues are not generated at the expected rate, demand for services exceeds planned expenditures, or both, resulting in a near-term operating deficit. States have tapped fiscal reserves to cope with revenue shortfalls during recent recessions, as indicated by their reported total balances, which are comprised of general fund ending balances and amounts in state budget stabilization "rainy day" funds. Figure 1 depicts the state and local simulated operating balance only, and does not include fiscal reserves or other budget measures used to cope with revenue shortfalls.

years, and that state and local governments would need to make substantial policy changes to avoid these fiscal imbalances in the future.¹

In recent years, the state and local government sector has seen an increase in tax receipts following declines during 2008 and into 2009. Specifically, from the second quarter of 2009 to the second quarter of 2014, total tax receipts increased 9 percent in real dollars. Income and sales taxes accounted for most of the growth, increasing 20 percent and 15 percent respectively, in real dollar terms during the same period. Property tax receipts continued to lag and decreased 5 percent in real dollars from the second quarter of 2009 to the second quarter of 2014, as real estate values remained suppressed.

However, during the last year, from the second quarter of 2013 to the second quarter of 2014, total tax receipts declined 1 percent and income tax receipts declined 8 percent in real dollars. In the long term, as a percentage of gross domestic product (GDP), our model suggests that at current rates total tax revenues for the sector would not return to the 2007 historical high until 2058, near the end of our simulation period.

A primary driver of the decline in the sector's operating balance in the long term is the rising health-related costs of state and local expenditures on Medicaid and the cost of health care compensation for state and local government employees and retirees. Since most state and local governments are required to balance their operating budgets, the declining fiscal conditions indicated by our simulations continue to suggest that the sector would need to make substantial policy changes to avoid fiscal imbalances that would likely grow in the future. That is, absent any intervention or policy changes, state and local governments are facing, and will continue to face, an increasing gap between receipts and expenditures in the coming years.

Declines in state and local pension asset values stemming from the 2007 to 2009 economic recession could also affect the sector's long-term fiscal position. Using real dollars, pension asset values increased about 6 percent from 2012 through 2013, from approximately \$2.67 trillion in 2012 to \$2.83 trillion in 2013. However, as of 2013, values have not recovered to match or exceed the 2007 value of \$2.91 trillion. In our past work, we

¹The simulation assumes that the tax structure is unchanged in the future and that the provision of real government services per capita remains relatively constant.

reported that while most state and local government pension plans have assets sufficient to cover benefit payments to retirees for a decade or more, plans have experienced a growing gap between assets and liabilities.² In response to this gap, state and local governments are taking steps to manage their pension obligations, including reducing benefits and increasing employees' contributions.³

Policy Changes Required in the State and Local Government Sector to Maintain Long-Term Fiscal Balance

One way of measuring the long-term fiscal challenges faced by the state and local government sector is through a measure known as the “fiscal gap.”⁴ The fiscal gap is an estimate of the action needed today and maintained for each year going forward to achieve fiscal balance during the next 50 years. We measured the gap as the amount of the spending reductions needed to prevent negative operating balances. As shown in figure 2, under our simulation, state and local sector expenditures rise considerably as a percentage of GDP during the simulation time frame.⁵ We calculated that closing the fiscal gap would require action to be taken today and maintained for each year equivalent to an 18 percent reduction in the state and local government sector’s current expenditures. Closing the fiscal gap through revenue increases would require action of similar magnitude through increases in state and local tax revenues. More likely, closing the fiscal gap would involve some combination of both expenditure reductions and revenue increases.⁶

²Our most recent prior model update is GAO, *State and Local Governments’ Fiscal Outlook: April 2013 Update*, [GAO-13-546SP](#), (Washington, D.C.: Apr. 29, 2013).

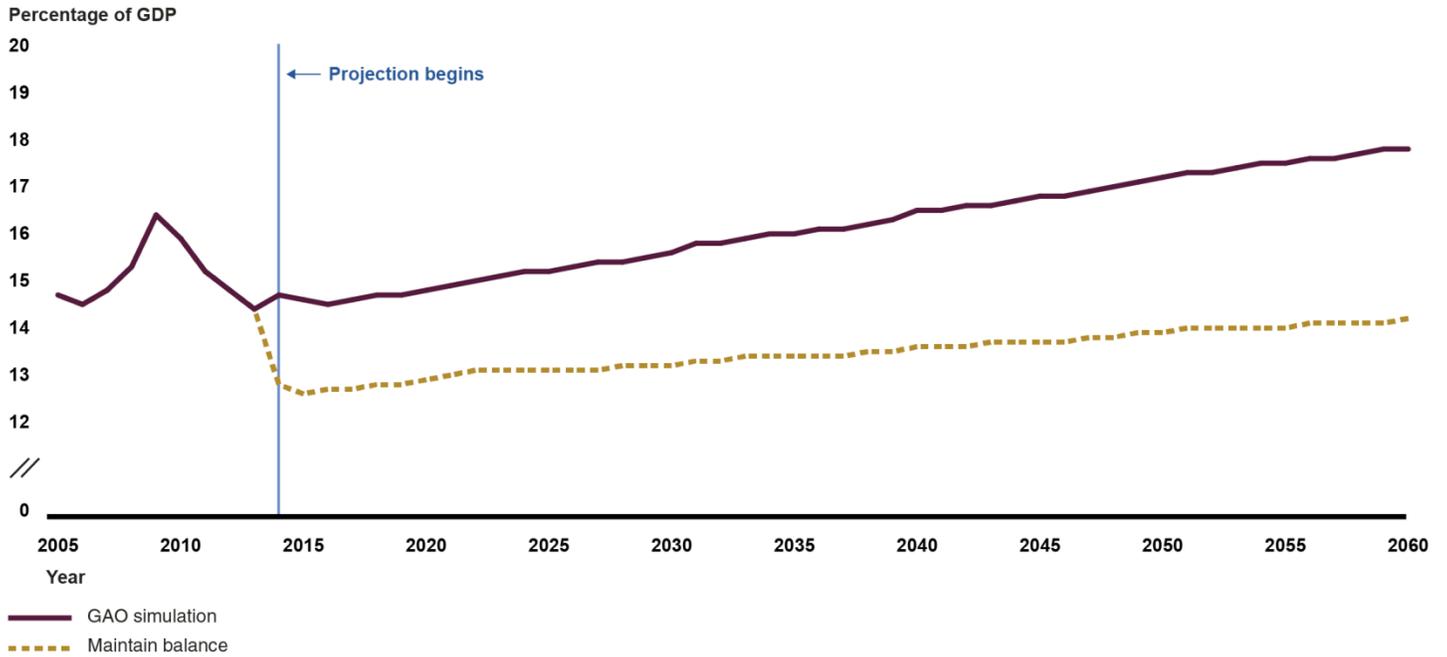
³GAO, *State and Local Government Pension Plans: Economic Downturn Spurs Efforts to Address Costs and Sustainability*, [GAO-12-322](#) (Washington, D.C.: Mar. 2, 2012).

⁴The fiscal gap for the state and local model is calculated for the years 2014 to 2063.

⁵As noted earlier, in our simulation, we assumed that the tax structure does not change in the future and that the provision of real government services per capita remains roughly constant.

⁶The “maintain balance” spending path shown in figure 2 is illustrative. Our model assumes no economic effects from closing the state and local fiscal gap. Because abrupt spending declines or tax increases would likely have negative effects on both state and local governments and the economy as a whole, the adjustments needed to achieve fiscal balance would likely need to be adopted gradually.

Figure 2: State and Local Government Action Required to Maintain Balance (Expenditure Reductions, as a Percentage of GDP)



Sources: GAO calculations using Bureau of Economic Analysis data and GAO simulations, updated December 2014. | GAO-15-224SP

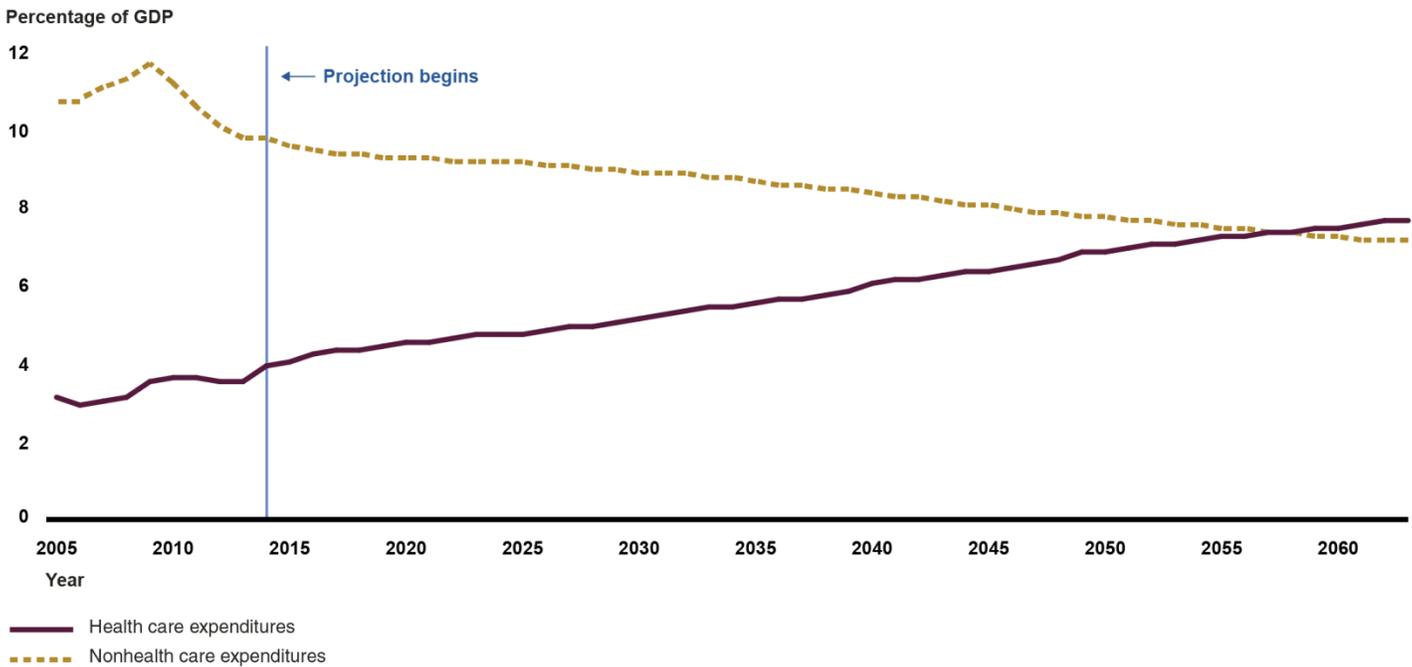
Note: Historical data from 2005 to 2013 are from BEA's NIPA. Our simulations are from 2014 to 2063, using many CBO projections and assumptions, particularly for the next 10 years.

State and Local Governments Continue to Face Fiscal Challenges from Estimated Growth in Health-Related Costs

Our simulations show that a primary driver of long term-fiscal challenges for the state and local government sector continues to be the growth in health-related costs. Specifically, state and local Medicaid expenditures and the cost of health care compensation for state and local government employees and retirees generally grow at a rate that exceeds GDP.⁷ The model's simulations suggest that the sector's health-related costs will be about 3.9 percent of GDP in 2014 and 7.4 percent of GDP in 2060. In contrast, in our model other types of state and local government expenditures—such as wages and salaries of state and local workers—decline as a percentage of GDP and by 2060 drop below the sector's health-related costs. The model's simulations indicate that the sector's nonhealth-related costs will be about 9.7 percent of GDP in 2014 and about 7.2 percent of GDP in 2060. Our simulations for health-related and other expenditures are shown in figure 3.

⁷The health-related cost growth assumption in our model includes adjustments in response to the March 2010 passage of the Patient Protection and Affordable Care Act (PPACA). Pub. L. No. 111-148, 124 Stat. 119 (Mar. 23, 2010), as amended by the Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152, 124 Stat. 1029 (Mar. 30, 2010) (hereafter, "HCERA"). In this report, references to PPACA include any amendments made by HCERA. Our model assumes health care excess cost growth for Medicaid of about 0.6 percent for 2014 to 2023, and about 1 percent from 2024 to the end of our simulation period. For other health-related receipts and expenditures, including health-related compensation of state and local government employees and retirees, our model assumes health care excess cost growth of about 1.3 percent for 2014 to 2023 and 1.2 percent for 2024 to the end of our simulation period. These rates are based on national health care expenditure projections consistent with the intermediate assumptions in the Medicare Board of Trustees 2014 report.

Figure 3: Health and Nonhealth Expenditures of State and Local Governments, as a Percentage of GDP



Sources: GAO calculations using Agency for Healthcare Research and Quality data and Bureau of Economic Analysis data and GAO simulations, updated December 2014. | GAO-15-224SP

Note: Historical data from 2005 to 2013 are from BEA's NIPA. Our simulations are from 2014 to 2063, using many CBO projections and assumptions, particularly for the next 10 years.

With regard to revenue growth over the long term, our simulations suggest that, excluding Medicaid grants from the federal government, state and local sector total revenues, which include non-Medicaid federal grants, would gradually decline as a percentage of GDP during the simulation period. At the same time, some categories of tax receipts could gradually increase as a percentage of GDP. Property tax receipts, for example, may increase slightly from 2.7 percent of GDP to 2.8 percent of GDP over the next 50 years, but at current rates would remain below their 2009 peak level of 3.0 percent of GDP through 2060. Sales tax receipts, on the other hand, are shown in our simulations to gradually decline as a percentage of GDP during the same period.

As we have reported in prior work, the effect of the Patient Protection and Affordable Care Act (PPACA) on the long-term state and local fiscal outlook is uncertain and may depend on the states' implementation of the

act and future rates of health care cost growth.⁸ For example, under PPACA states may expand Medicaid coverage to millions of lower income adults.⁹ The federal government will cover a large share of the costs of the Medicaid expansion and states are expected to ultimately have to bear some costs during a period when their budgets are already under pressure. CBO has noted that given both the financial incentives and disincentives for states to participate in the Medicaid expansion, what states will decide to do regarding the expansion under PPACA is highly uncertain. While some of the uncertainty surrounding PPACA is related to the implementation of the act, there is also uncertainty about the future underlying rate of health care cost growth.¹⁰

Data, Methodology, and Equation Updates Used in Our 2014 State and Local Model Simulations

This update of the state and local government fiscal model used NIPA data prepared by the BEA as a primary data source, along with data from the Board of Governors of the Federal Reserve System, the Bureau of Labor Statistics, the Census Bureau, the Centers for Medicare and Medicaid Services (CMS), the CBO, the Office of Tax Analysis, and the Social Security Administration (SSA). These data sources are the same data sources we used for past updates. We used observations on the United States as a whole, so we treat the state and local government sector as a single unit of analysis rather than treating individual state and local governments as separate units of analysis. We used annual observations through 2013 where available.

Since our last update, the NIPA data have undergone major revisions. BEA released the initial results of the 14th comprehensive revision of the

⁸GAO, *State and Local Governments' Fiscal Outlook: April 2013 Update*, [GAO-13-546SP](#), (Washington, D.C.: Apr. 29, 2013).

⁹Under PPACA, states may expand Medicaid coverage to non-pregnant individuals under age 65 who have household incomes that do not exceed 133 percent of the federal poverty level. PPACA also imposes a 5 percent income disregard when calculating income, which, in effect, raises this income limit to 138 percent of the federal poverty level. States will receive an increased federal match for this expansion population, starting at 100 percent in 2014, gradually decreasing to 90 percent in 2020. 42 U.S.C. §§ 1396a(a)(10)(A)(i)(VIII), 1396a(e)(14)(I), 1396d(y).

¹⁰For further information on the future underlying rate of health care cost growth, see GAO, *Patient Protection And Affordable Care Act: Effect on Long-Term Federal Budget Outlook Largely Depends on Whether Cost Containment Sustained*, [GAO-13-281](#), (Washington, D.C.: Jan. 31, 2013).

NIPAs in July 2013.¹¹ These revisions provide opportunities for BEA to make changes to its economic accounts in order to increase the overall quality and usefulness of the accounts. We used data from the revised NIPAs in our simulation. To maintain internal consistency with the revised NIPA data, we updated our estimates of the historical relationships we use in our simulations. We discuss these updates in detail below.

Our model simulated the level of receipts and expenditures for the state and local government sector as a whole in future years based on current and historical spending and revenue patterns. Using the same methodology we used in prior updates, we simulated each major category of state and local government receipts and expenditures. Our simulations of key variables were consistent with the growth paths for these variables developed by CBO, CMS, and SSA where possible. Otherwise, we developed our own assumptions about the likely future growth paths of the variables in our model. Overall, our model assumes current policies remain in place. A detailed explanation of the model is available in appendixes I through IV of GAO, *State and Local Governments: Growing Fiscal Challenges Will Emerge during the Next 10 Years*, GAO-08-317 (Washington, D.C.: January 2008). Updates to the equations used in the model were listed in subsequent reports, including

GAO, *State and Local Governments' Fiscal Outlook: April 2013 Update*, GAO-13-546SP (Washington, D.C.: April 2013).

GAO, *State and Local Governments' Fiscal Outlook: April 2012 Update*, GAO-12-523SP (Washington, D.C.: April 2012).

GAO, *State and Local Governments' Fiscal Outlook: April 2011 Update*, GAO-11-495SP (Washington, D.C.: April 2011).

GAO, *State and Local Governments' Fiscal Outlook: March 2010 Update*, GAO-10-358 (Washington, D.C.: March 2010).

¹¹See Stephanie H. McCulla, Alyssa E. Holdren, and Shelly Smith, "Improved Estimates of the National Income and Product Accounts: Results of the 2013 Comprehensive Revision," *Survey of Current Business*, September 2013, pp. 14-45.

State and Local Government Revenues

We simulated the future growth paths of the five types of state and local government revenues: tax receipts, contributions to government insurance, income on financial assets, transfer receipts, and the surplus or deficit from government enterprises. We updated some of the equations we used to simulate tax receipts to maintain internal consistency and reflect the historical relationships in the revised NIPA data (see table 1). The equations we used to simulate the other types of revenues are the same equations used in our prior reports.

Table 1. Updated Estimates of Historical Relationships Used to Simulate State and Local Government Tax Receipts.

Tax or tax base	Simulation approach	Estimated historical relationship
State personal income tax receipts	We simulated state personal income tax receipts using the estimated historical elasticity of receipts with respect to taxable personal income, while also controlling for federal capital gains tax receipts. We did not adjust state personal income tax receipts for policy changes.	Our estimated elasticity of state personal income tax receipts with respect to taxable personal income changed from 1.14 to 1.25.
State and local sales tax receipts other than general sales tax receipts	We simulated state and local sales tax receipts other than general sales tax receipts using the estimated historical elasticity of receipts with respect to total income from wages and salaries.	Our estimated elasticity of state and local sales tax receipts other than general sales tax receipts with respect to total income from wages and salaries changed from 0.83 to 0.86.
State and local general sales tax base, personal consumption expenditures less food, services, and electronic and mail-order sales	We simulated the general sales tax base, personal consumption expenditures less food, services, and electronic and mail-order sales, using the estimated historical elasticity with respect to wages and salaries.	Our estimated elasticity of the sales tax base, personal consumption expenditures less food, services, and electronic and mail-order sales, with respect to wages and salaries changed from 0.97 to 0.92.
Real state and local property tax base, the real market value of real estate and other property outstanding excluding business equipment	We simulated the real property tax base, the real market value of real estate and other property outstanding excluding business equipment, using the estimated historical elasticity with respect to real gross domestic product.	Our estimated elasticity of the real property tax base, the real market value of real estate and other property outstanding excluding business equipment, with respect to real gross domestic product changed from 1.04 to 1.05.

Source: GAO analysis. | GAO-15-224SP

State and Local Government Expenditures

We simulated the future growth paths of the five types of state and local government expenditures: consumption expenditures, transfer (social benefits) payments to persons, interest paid on outstanding state and local government debt, subsidies, and purchases of fixed and nonproduced assets. We updated some of the equations used to simulate the interest paid on outstanding state and local government debt to maintain internal consistency and reflect the revised NIPA data (see table

2). The equations we used to simulate the other types of expenditures are the same equations used in our prior reports.

Table 2. Updated Estimates of Historical Relationships Used to Simulate State and Local Government Interest Paid on Outstanding Debt.

Interest rate or debt type	Simulation approach	Estimated historical relationship
Annual interest rate on state and local government 20-year general obligation bonds	We simulated the annual interest rate on state and local government 20-year general obligation bonds using the historical relationship between this rate, the lagged value of this rate, and the annual yield on 10-year Department of Treasury (Treasury) notes.	Our estimate of the change in the annual interest rate on state and local government 20-year general obligation bonds associated with a 1 percentage point increase in the annual yield on 10-year Treasury notes changed from 0.57 to 0.41. Our estimate of the change in the annual interest rate on state and local government 20-year general obligation bonds associated with a 1 percentage point increase in the prior year's rate changed from 0.24 to 0.47.
Short-term state and local government debt outstanding	We simulated short-term state and local government debt outstanding using the estimated historical relationship between short-term state and local government debt issuance as a fraction of gross domestic product and the change in state and local government net saving as a fraction of gross domestic product. We controlled for years with unusual amounts of short term debt issuance.	Our estimate of the change in short-term state and local government debt issuance as a fraction of gross domestic product associated with a one unit increase in the change in net saving as a fraction of gross domestic product changed from -0.22 to -0.20.
Medium- and long-term state and local government debt outstanding	We simulated medium- and long-term state and local government debt outstanding using the estimated historical relationship between medium- and long-term debt issuance as a fraction of the gap between state and local government gross investment and net purchases of nonproduced assets and federal investment grants and changes in the interest rate on state and local government 20-year general obligation bonds.	Our estimate of the change in medium- and long-term debt issuance as a fraction of the gap between state and local government gross investment and net purchases of nonproduced assets and federal investment grants associated with a 1 percentage point change in the change in state and local government 20-year general obligation bonds changed from -0.081 to -0.078.
Outstanding federal government loans to state and local governments	We simulated outstanding federal government loans to state and local governments using the estimated historical elasticity of real outstanding federal government loans to state and local governments with respect to real gross domestic product.	Our estimated elasticity of outstanding federal government loans to state and local governments using the estimated historical elasticity of real outstanding federal government loans to state and local governments with respect to real gross domestic product changed from -1.47 to -2.45.

Source: GAO analysis. | GAO-15-224SP

We conducted our work for this model update from February 2014 to December 2014 in accordance with all sections of our Quality Assurance Framework that are relevant to our objectives. The framework requires that we plan and perform the engagement to obtain sufficient and appropriate evidence to meet our stated objectives and to discuss any limitations in our work. We believe that the information and data obtained and the analysis conducted provide a reasonable basis for any findings and conclusions.

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Related GAO Products

This product is part of a body of work on long-term fiscal challenges. Related products are listed below and can be found at www.gao.gov/special.pubs/longterm/longtermproducts.html.

State and Local Governments' Fiscal Outlook: April 2013 Update. [GAO-13-546SP](#). Washington, D.C.: April 29, 2013.

State and Local Governments' Fiscal Outlook: April 2012 Update. [GAO-12-523SP](#). Washington, D.C.: April 2, 2012.

State and Local Government Pension Plans: Economic Downturn Spurs Efforts to Address Costs and Sustainability. [GAO-12-322](#). Washington, D.C.: March 2, 2012.

State and Local Governments' Fiscal Outlook: April 2011 Update. [GAO-11-495SP](#). Washington, D.C.: April 6, 2011.

State and Local Governments: Knowledge of Past Recessions Can Inform Future Federal Fiscal Assistance. [GAO-11-401](#). Washington, D.C.: March 31, 2011.

State and Local Government Pension Plans: Governance Practices and Long-term Investment Strategies Have Evolved Gradually as Plans Take on Increased Investment Risk. [GAO-10-754](#). Washington, D.C.: August 24, 2010.

State and Local Governments: Fiscal Pressures Could Have Implications for Future Delivery of Intergovernmental Programs. [GAO-10-899](#). Washington, D.C.: July 30, 2010.

State and Local Governments' Fiscal Outlook: March 2010 Update. [GAO-10-358](#). Washington, D.C.: March 2, 2010.

Update of State and Local Government Fiscal Pressures. [GAO-09-320R](#). Washington, D.C.: January 26, 2009.

State and Local Fiscal Challenges: Rising Health Care Costs Drive Long-term and Immediate Pressures. [GAO-09-210T](#). Washington, D.C.: November 19, 2008.

State and Local Government Pension Plans: Current Structure and Funded Status. [GAO-08-983T](#). Washington, D.C.: July 10, 2008.

State and Local Government Retiree Benefits: Current Funded Status of Pension and Health Benefits. [GAO-08-223](#). Washington, D.C.: January 29, 2008.

State and Local Governments: Growing Fiscal Challenges Will Emerge during the Next 10 Years. [GAO-08-317](#). Washington, D.C.: January 22, 2008.

State and Local Government Retiree Benefits: Current Status of Benefit Structures, Protections, and Fiscal Outlook for Funding Future Costs. [GAO-07-1156](#). Washington, D.C.: September 24, 2007.

State and Local Governments: Persistent Fiscal Challenges Will Likely Emerge within the Next Decade. [GAO-07-1080SP](#). Washington, D.C.: July 18, 2007.

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