

THE NELSON A. ROCKEFELLER INSTITUTE OF GOVERNMENT

UNIVERSITY AT ALBANY State University of New York

HIGHLIGHTS

- State tax revenues grew by 2.7 percent in the third quarter of 2012, according to Rockefeller Institute research and Census Bureau data.
- The Southwest and Rocky Mountain states showed the largest total tax revenue gains in the third quarter of 2012, though their revenues remain below peak levels.
- At the end of FY 2012, total tax revenues and sales tax revenues were above the peak levels reported in FY 2008 in nominal terms, while personal income tax collections were still below the peak levels of FY 2008.
- In twenty-two states, total tax collections in FY 2012 were still below peak levels; in nine of those states, the peak-to-2012 decline remained in double-digit percentages.
- State income, sales, and corporate income tax revenue has been recovering far more slowly from the recent recession than from previous recessions.
- Year-end actions by taxpayers to minimize their expected federal tax liability in light of the "fiscal cliff" and federal actions to avert the cliff are likely to boost state income taxes in the October-December quarter and in the first and second quarters of 2013, lifting state tax revenue in the 2012-13 state fiscal year. However, these year-end actions are likely to depress state income tax revenue slightly in 2013-14 state fiscal years. (See "Bumpy Ride Ahead" on p. 8.)

STATE REVENUE REPORT

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State Tax Revenues Continue Slow Rebound

At the End of Fiscal 2012, Personal Income Tax Revenues Were Still Below the Peak Levels Recorded in Fiscal 2008

Lucy Dadayan and Donald J. Boyd

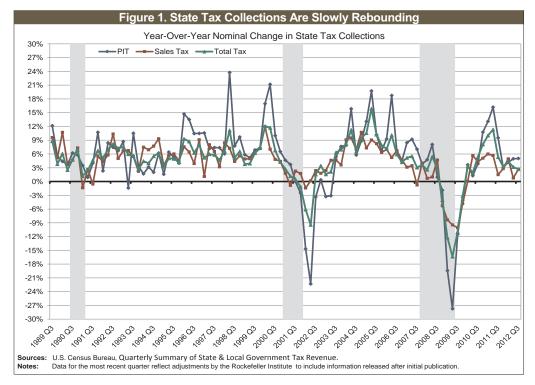
Overall State Taxes and Local Taxes

Total state tax collections grew for the eleventh consecutive quarter in July-September 2012. Overall state tax revenues increased by 2.7 percent from the same quarter of the previous year, according to data collected by the Rockefeller Institute and the Census Bureau. The Institute's findings indicate slightly weaker fiscal conditions for states than the preliminary data released in December 2012 by the Census Bureau, which reported an overall increase of 2.9 percent. We have updated those figures to reflect data we have since obtained and to reflect differences in how we measure revenue for purposes of the State Revenue Report. (See "Adjustments to Census Bureau Tax Collection Data" on page 25.¹)

Figure 1 shows the nominal percent change over time in state tax collections for personal income tax, sales tax, and total taxes. As shown there, declines in personal income tax and sales tax collections as well as in overall state tax collections were steeper during and after the Great Recession that began in December 2007 than around previous recessions. Overall tax collections as well as personal income and sales tax revenues showed continued growth in the third quarter of 2012. However, the growth in total tax collections was considerably softer than in the previous quarters. Personal income tax collections increased by 5 percent and sales tax collections rose by 2.7 percent.

Despite increases over eleven quarters — nearly three years of continual gains — overall tax collections are still comparatively weak by recent historical standards. State tax revenues were 1.4 percent above in the third quarter of 2012 than in the same quarter of 2008. Total state tax collections in the third quarter of 2012 were above the peak levels in most states. In the third quarter of 2012, thirty-seven states reported higher tax revenue collections than in the same quarter of 2008. However, if we adjust the numbers for inflation, nationwide tax receipts show a 4.4 percent decline in the third quarter of 2012 compared to the same quarter of 2008.

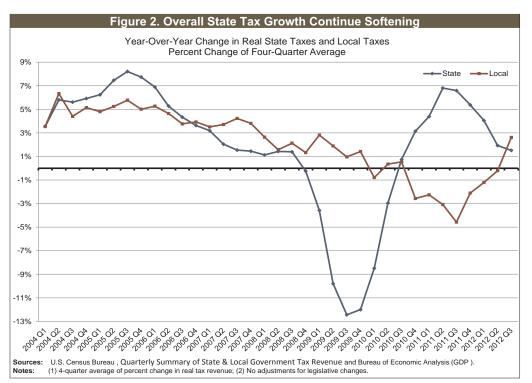
Figure 2 shows the four-quarter moving average of year-overyear change in state tax collections and local tax collections, after adjusting for inflation. In addition, we have adjusted the Census



Bureau's local tax revenues to reflect differences between the Census Bureau's prior survey methodology and a revised survey methodology now used for collecting property tax revenues.² As shown in Figure 2, the yearover-year change in state taxes, adjusted for inflation, has averaged 1.5 percent over the last four quarters. This represents substantial softening from the 6.6 percent average growth of a year ago, but a considerable improvement

from the 0.7 percent average growth of two years ago.

Overall, the growth in state tax collections has been softening in the last five quarters. After seven consecutive quarter declines, local tax collections have seen considerable growth in the third quarter of 2012. Local taxes grew in real, year-over-year terms by an average of 2.6 percent over the last four quarters, a signifi-



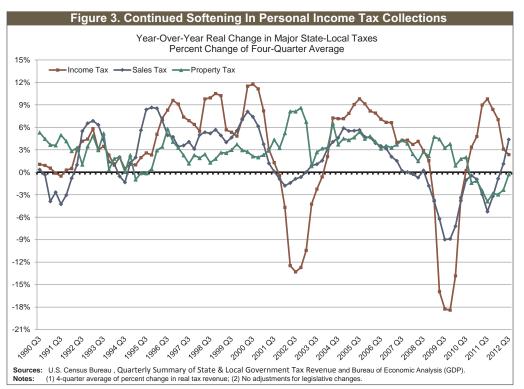
cant improvement over the 4.6 percent decline of the preceding year. Inflation over the year, as measured by the gross domestic product deflator, was 1.6 percent.

Local tax collections have been relatively weak by historical standards over the last three years due in part to the lagged impact of falling housing prices on property tax collections. For the quarter ending in September, the 2.6 percent growth in the four-quarter moving average of local tax collections is relatively weak compared to historical averages. The largest year-over-year growth in local tax collections in recent history was recorded in the third quarter of 2005, at 5.8 percent.

Most local governments rely heavily on property taxes, which tend to be relatively stable and respond to property value declines more slowly than income, sales, and corporate taxes respond to declines in the overall economy. Over the last two decades, property taxes have consistently made up at least two-thirds of total local tax collections. Collections from local property taxes made up 75.6 percent of such receipts during the third quarter of 2012. Local property tax revenues showed a growth of 8.7 percent in nominal terms in the third quarter of 2012 compared to the same quarter of 2011.

Sales taxes represented about 10.4 percent of local tax revenues in the third quarter of 2012. Local sales tax collections increased by 25.8 percent in the third quarter of 2012 in nominal terms. Collections from local individual income taxes, a much smaller contributor to overall local revenues, showed a decline of 3 percent.

Figure 3 shows the four-quarter average of year-over-year growth in state and local income, sales, and property taxes, adjusted for inflation. Both the income tax and the sales tax showed slower growth, and then outright decline, from 2006 through most of 2009. By this measure, income tax showed some growth for the ninth consecutive quarter, although the growth has been softening for the fourth consecutive quarter. On the other hand, the fourquarter average of year-over-year comparisons showed declines



in state-local property taxes for the eighth consecutive quarter. State-local sales tax collections showed some growth in the third quarter of 2012. The growth in the third quarter of 2012 marks the second consecutive quarter growth, following fourteen consecutive growth declines.

State Tax Revenue

Total state tax revenue rose in the third quarter of 2012 by 2.7 percent relative to a year ago, before adjustments for inflation and legislated changes (such as changes in tax rates). The income tax and sales tax both showed growth at 5 and 2.7 percent, respectively, and the corporate income tax increased by 5.8 percent. Tables 1 and 2 portray growth in tax revenue with and without adjustment for inflation, and growth by major tax. Eleven states reported declines in total tax revenue during the third quarter of 2012, while four states reported double-digit increases in the third quarter (see Tables 6 and 7 on pages 15-16). All regions but the New England and Far West reported growth in total collections. The Southwest region showed the largest gain at 8 percent, followed by the Rocky Mountain states at 5.5 percent. The New England and Far West region showed decline of 0.1 and 0.3 percent, respectively.

Preliminary figures collected by the Rockefeller Institute for the October-November months of 2012 indicate that revenues in most states continued to grow.³ Overall collections in forty-five early reporting states showed growth of 5.8 percent in the October-November months of 2012 compared to the same months of 2011.

Personal Income Tax

In the third quarter of 2012, personal income tax revenue made up at least a third of total tax revenue in thirty states, and was larger than the sales tax in thirty-two states. Personal income tax revenues rose for the eleventh consecutive quarter, with 5 percent growth in the July-September 2012 quarter compared to the same period in 2011. Personal income tax collections were above the recessionary peak for the quarter in nominal terms, ending 5.7 percent higher than in the third quarter of 2008.

All regions reported increases in personal income tax collections. The largest growth was in the Great Lakes and Rocky Mountain regions, where collections increased by 7.7 percent each in the third quarter of 2012.

Overall, four states reported declines in personal income tax collections; thirty-nine states reported growth in personal income tax collections for the quarter with six states reporting double-digit increases. The four states reporting declines in personal income tax collections are Maine, New Mexico, Rhode Island, and Wisconsin. The largest declines were reported in New Mexico at 12.2 percent, followed by Wisconsin at 4.3 percent. In terms of dollar value, the largest increase was reported in California where personal income tax collections grew by \$0.6 billion or 5.8 percent. The large growth in personal income tax collections in California is mostly driven by legislated tax changes. On November 6, 2012, California voters adopted Proposition 30, which increased the personal income tax rate on taxpayers making over \$500,000 for a seven-year period that is retroactive to January 1, 2012, through December 31, 2018.

We can get a clearer picture of collections from the personal income tax by breaking this source down into two major

2.7

3.2

4.3

3.3

5.3

11.3

10.0

8.1

5.3

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3.3

(3.1)

(11.0)

(16.3)

(12.2)

(4.0)

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0.5 1.2

2.7

4.2

6.8

11.7

12.0

Y	ear-Over-Year I		•
arter	Total Nominal	Inflation Rate	Adjusted Real
2 Q3	2.7	1.6	1.0
12 Q2	3.2	1.7	1.4
)12 Q1	4.3	2.0	2.3
011 Q4	3.3	2.0	1.3
011 Q3	5.3	2.4	2.8
011 Q2	11.3	2.2	8.9
011 Q1	10.0	2.0	7.9
010 Q4	8.1	1.8	6.1
010 Q3	5.3	1.6	3.6
010 Q2	1.9	1.3	0.7
010 Q1	3.3	0.6	2.6
009 Q4	(3.1)	0.5	(3.6)
009 Q3	(11.0)	0.3	(11.3)
009 Q2	(16.3)	1.0	(17.1)
009 Q1	(10.0)	1.8	(13.7)
003 Q1	(4.0)	2.1	(6.0)
008 Q4	(4.0)	2.1	0.3
008 Q3	2.0 5.4	2.0	3.3
008 Q2 008 Q1		2.0	0.5
008 Q1 007 Q4	2.6		
	3.6	2.6	0.9
007 Q3	3.1	2.6	0.4
2007 Q2	5.5	3.1	2.4
007 Q1	5.2	3.3	1.8
2006 Q4	4.2	2.9	1.3
006 Q3	5.9	3.2	2.6
06 Q2	10.1	3.5	6.3
006 Q1	7.1	3.3	3.7
005 Q4	7.9	3.5	4.3
05 Q3	10.2	3.4	6.6
005 Q2	15.9	3.1	12.4
005 Q1	10.6	3.3	7.1
004 Q4	9.4	3.2	6.0
2004 Q3	6.5	3.0	3.4
004 Q2	11.2	2.8	8.2
004 Q1	8.1	2.2	5.7
2003 Q4	7.0	2.1	4.8
003 Q3	6.3	2.1	4.1
003 Q2	2.1	2.0	0.1
003 Q1	1.6	2.2	(0.6)
2002 Q4	3.4	1.8	1.6
002 Q3	1.6	1.5	0.0
002 Q2	(9.4)	1.4	(10.7)
2002 Q1	(6.1)	1.7	(7.6)
2001 Q4	(1.1)	2.0	(3.0)
001 Q3	0.5	2.2	(1.7)
001 Q2	1.2	2.5	(1.7)
001 Q2	2.7	2.3	0.4
000 Q4	4.2	2.4	1.8
000 Q3	6.8	2.3	4.4
000 Q2	11.7	2.0	9.5
000 Q1	12.0	2.0	9.9

Table 3. Personal Income Tax Withholding, By State									
Last Four Quarters, Percent Change									
	2011		2012						
	Oct-Dec	Jan-Mar	Apr-June	July-Sep					
United States	3.5	4.4	4.8	2.7					
New England	9.1	6.1	4.1	0.8					
Connecticut	28.1	12.0	6.9	1.1					
Maine	5.7	(0.1)	3.0	1.8					
Massachusetts	2.1	3.4	3.1	0.6					
Rhode Island	0.1	11.5	3.4	1.6					
Vermont	1.9	2.5	1.7	(2.9)					
Mid-Atlantic	2.3	(1.5)	2.0	(0.2)					
Delaware	2.9	1.8	4.3	2.7					
Maryland	3.6	2.7	6.3	1.9					
New Jersey	2.1	4.1	0.8	(5.4)					
New York	1.7	(5.2)	(0.0)	(0.4)					
Pennsylvania	2.8	4.1	3.6	2.7					
Great Lakes	17.0	9.7	7.0	4.1					
Illinois	64.5	22.7	3.3	2.6					
Indiana	4.9	3.5	6.0	8.8					
Michigan	1.6	8.1	11.3	9.9					
Ohio	4.1	4.9	5.1	5.0					
Wisconsin	(2.9)	(0.6)	11.9	(6.5)					
Plains	3.7	4.5	6.0	5.2					
Iowa	3.5	2.7	6.3	7.2					
Kansas	4.2	6.5	8.9	7.3					
Minnesota	4.1	5.1	3.4	3.7					
Missouri	2.5	3.3	7.5	3.0					
Nebraska	3.8	6.0	7.3	9.7					
North Dakota	13.0	3.9	7.2	8.4					
Southeast	1.7	4.4	5.3	3.0					
Alabama	1.1	2.1	5.4	6.3					
Arkansas	4.3	3.2	4.7	8.0					
Georgia	(0.9)	6.5	4.5	4.2					
Kentucky	4.1	3.6	8.7	(1.2)					
Louisiana	(1.8)	(0.0)	5.8	2.7					
Mississippi	3.5	5.2	5.8	6.5					
North Carolina	2.4	4.7	4.0	4.2					
South Carolina	2.0	4.1	2.7	3.9					
Virginia	2.1	4.0	6.7	(0.7)					
West Virginia	7.4	7.9	8.0	4.1					
Southwest	4.4	4.6	2.8	1.9					
Arizona	1.9	2.6	4.0	2.2					
New Mexico	(0.3)	5.0	(2.1)	ND					
Oklahoma	10.1	7.0	3.5	1.6					
Rocky Mountain	(0.6)	7.1	6.1	6.1					
Colorado	(0.9)	7.1	5.4	5.6					
Idaho	3.6	(1.0)	4.3	3.5					
Montana	6.1	9.4	9.4	7.4					
Utah	(4.3)	10.9	7.3	8.1					
Far West	(4.3)	7.6	5.8	4.1					
California	(5.9)	7.8	6.2	4.3					
Hawaii	3.7	3.4	(0.4)	4.9					
Oregon	7.6	6.8	4.2	2.2					
Source: Individual s									

Source: Individual state data, analysis by Rockefeller Institute.

Note: Nine states — Alaska, Florida, New Hampshire, Nevada, South Dakota, Tennessee, Texas, Washington, and Wyoming — have no broad-based personal income tax and are therefore not shown in this table. ND = No data components for which we have data: withholding and quarterly estimated payments. The Census Bureau, the source of much of the data in this report, does not collect data on individual components of personal income tax collections. The data presented here were collected by the Rockefeller Institute.

Withholding

Withholding is a good indicator of the current strength of personal income tax revenue because it comes largely from current wages and is much less volatile than estimated payments or final settlements. Table 3 shows that withholding for the July-September 2012 quarter continued to improve, increasing by 2.7 percent for the forty states with broad-based personal income taxes and for which we have preliminary data. However, the growth in withholding has softened considerably compared to previous quarters.

Thirty-four states reported growth in withholding for the third quarter of 2012, while six states showed declines. Among individual states, Michigan and Nebraska reported the strongest growth in the third quarter of 2012, at 9.9 and 9.7 percent, respectively. The Rocky Mountain and Plains regions reported the largest growth in withholding at 6.1 and 5.2 percent, respectively, while the Mid-Atlantic region was the only region reporting declines at 0.2 percent. The decline in the Mid-Atlantic region is partially attributable to New York, where lawmakers restructured the personal income tax brackets. New York tax rates were reduced for the most part but increased for the highest bracket from 6.85 percent to 8.92 percent for income above \$1.0 million for single filers and \$2.0 million for married couples.

Estimated Payments

The highest-income taxpayers generally make estimated tax payments (also known as declarations) on their income not subject to withholding tax. This income often comes from investments, such as capital gains realized in the stock market. Estimated payments represent a relatively small proportion of overall income-tax revenues — some \$9.8 billion, or roughly 17 percent of all income-tax revenues, in the third quarter of 2012 — but can have a disproportionate impact on the direction of overall collections.

The first payment for each tax year is due in April in most states and the second, third, and fourth are generally due in June, September, and January. In the thirty-seven states for which we have complete data, the median payment was up by 6.7 percent for the first three payments and by 7.9 percent for the third payment compared to the previous year. Five states reported declines in estimated payments for the third payment and seven states reported declines for the first three payments.

General Sales Tax

State sales tax collections in the July-September 2012 quarter showed growth of 2.7 percent from the same period in 2011. This is the eleventh quarter in a row that sales tax collections rose. Increases in collections were reported during the third quarter in all regions but the Great Lakes and New England, where receipts declined by 2.8 and 0.9 percent, respectively. The Southwest and Rocky Mountain regions reported the largest increases in sales tax collections at 11.4 and 5.4 percent, respectively.

Thirty-one of forty-five states with broad-based sales taxes reported growth in collections for the quarter; four states reported double-digit gains. North Dakota and Texas reported the largest growth at 30.3 and 13.3 percent, respectively. Fourteen states reported declines in sales tax collections in the third quarter of 2012, with Connecticut and South Dakota reporting the largest declines at 13.1 and 9.6 percent, respectively. Some of such declines are partially attributable to the exemption of temporary tax measures.

Corporate Income Tax

Corporate income tax revenue is highly variable because of volatility in corporate profits and in the timing of tax payments. Many states, such as Delaware, Hawaii, Montana, Rhode Island, and Vermont, collect relatively little revenue from corporate taxes, and can experience large fluctuations in percentage terms. For all these reasons, there is often significant variation in states' gains or losses for this tax.

Corporate tax revenue increased by 5.8 percent in the third quarter of 2012 compared to a year earlier. Four regions — the Mid-Atlantic, Rocky Mountain, Southeast, and Southwest states — reported double-digit increases. Two other regions — the New England and Far West states — reported declines in corporate income tax collections at 13.8 and 12.4 percent, respectively.

Among forty-six states that have a corporate income tax, twenty-nine reported growth, with twenty-one enjoying double-digit gains. Seventeen states reported declines for the third quarter of 2012 compared to the same quarter of the previous year, of which ten states reported double-digit declines. The largest declines in terms of dollar value were reported in California, where corporate income tax collections fell by \$0.3 billion or 20.2 percent. The decline in California is partially due to changes in

γ	/ear-Over-Year F	Real Percent Ch	nange; Four-Quar	ter Movina Ave	rades	
	Property tax	Motor fuel sales tax	Tobacco product sales tax	Alcoholic beverage sales tax	Motor vehicle & operators license taxes	Other taxes
Nominal collections (mlns), latest 12 months	\$12,616	\$41,063	\$16,985	\$5,969	\$24,685	\$128,895
2012Q3	(11.0)	(0.6)	(4.2)	3.1	0.6	5.2
2012Q3	(10.6)	(0.0)	(1.8)	2.3	0.2	7.7
2012Q2 2012Q1	(10.0)	0.1	(1.3)	1.0	0.2	9.3
2012Q1 2011Q4	1		1 A A		1.4	9.3
	(9.1)	2.8	(1.3)	(1.0)		
2011Q3	(5.7)	5.6	(0.5)	(0.0)	0.4	12.3
2011Q2	(1.9)	8.6	0.6	1.5	2.2	12.0
2011Q1	0.5	8.1	2.6	3.1	3.3	9.1
2010Q4	5.9	5.2	3.0	3.1	3.9	7.2
2010Q3	11.0	2.3	2.1	2.9	5.5	4.2
2010Q2	11.1	0.5	0.4	2.0	3.7	(2.5)
2010Q1	9.8	(0.8)	(1.2)	0.7	1.4	(9.2)
2009Q4	6.0	(2.0)	(1.6)	0.5	0.1	(13.7)
2009Q3	(0.7)	(3.3)	0.3	(0.0)	(1.3)	(13.4)
2009Q2	(2.2)	(5.5)	1.1	(0.3)	(1.1)	(6.9)
2009Q1	(3.9)	(6.1)	2.4	0.2	(0.6)	3.7
2008Q4	(3.1)	(5.1)	2.9	0.2	(1.3)	7.2
2008Q3	1.6	(3.6)	3.3	(0.3)	(0.8)	9.6
2008Q2	3.2	(1.9)	5.7	0.3	(0.5)	7.5
2008Q1	3.9	(1.4)	6.0	0.4	(1.2)	3.1
2007Q4	3.3	(1.9)	5.9	0.4	(0.6)	2.1
2007Q3	1.3	(0.9)	3.8	1.5	(1.0)	(0.5)
2007Q2	(0.3)	(1.3)	0.3	1.3	(1.0)	(1.4)
2007Q1	1.7	(0.1)	1.5	0.5	0.4	(1.1)
2006Q4	0.1	0.7	2.6	1.0	0.9	(0.4)
2006Q3	(0.3)	(1.1)	5.3	1.1	0.8	2.0
2006Q2	(0.1)	1.4	8.9	1.1	0.7	4.2
2006Q1	0.8	1.5	6.9	2.5	0.1	5.2
2005Q4	1.9	2.1	5.4	1.6	0.3	7.1
2005Q3	3.4	3.6	4.2	(0.2)	1.9	6.3
2005Q3 2005Q2	3.4	0.9	2.1	(0.2)	2.7	4.9
2005Q1	1.7	1.4	2.9	(2.4)	3.6	5.7
2004Q4	(4.9)	1.6	3.6	(1.4)	5.6	6.0
2004Q3	(2.3)	1.5	3.6	0.0	6.0	7.6
2004Q2	3.6	2.1	4.8	0.5	6.6	9.0
2004Q1	1.0	0.4	10.5	4.3	5.5	7.5
2003Q4	8.6	(1.0)	17.0	3.9	3.9	5.6
2003Q3	5.6	(1.2)	26.2	2.2	2.8	3.8
2003Q2	(1.1)	(0.4)	35.7	3.1	2.6	2.6
2003Q1	(5.0)	0.7	27.1	0.6	3.6	2.2
2002Q4	(4.8)	1.0	17.2	(0.1)	2.9	2.1
2002Q3	(6.7)	0.7	5.6	2.7	2.5	2.6
2002Q2	(4.4)	1.1	(5.9)	(0.2)	0.6	3.4
2002Q1	5.1	1.7	(5.0)	(0.2)	(1.2)	2.1
2002Q1 2001Q4	2.7	2.5		0.5		2.1
			(1.5)		(2.9)	
2001Q3	(0.3)	3.5	2.6	(1.4)	(3.3)	1.5
2001Q2	(5.0)	2.5	7.6	1.7	(0.7)	0.9
2001Q1	(12.6)	1.2	8.4	1.4	2.4	3.6
2000Q4	(11.1)	1.2	5.9	1.8	5.9	4.2
2000Q3	(4.1)	1.3	1.7	3.2	6.9	6.5
2000Q2	(2.6)	1.2	(1.3)	2.2	5.9	7.9
2000Q1	2.5	2.3	(4.5)	3.2	3.0	4.7

Corporation Tax Law, which reduced the number of required estimated payments from four to three and eliminated the third estimated payment due in September. If we exclude California, corporate income tax collections show a growth of 11.2 percent for the nation in the third quarter of 2012.

Other Taxes

Census Bureau quarterly data on state tax collections provide detailed information for some of the smaller taxes not broken out separately in the data collected by the Rockefeller Institute. In Table 4, we show fourquarter moving average real growth rates for the nation as a whole.

Revenues from smaller tax sources showed a mixed picture. The motor fuel sales tax, the most significant of the smaller taxes, showed nationwide decline of 0.6 percent, which is the second consecutive quarter decline. State property taxes, a relatively small revenue source for states, fell by 11 percent and revenues from tobacco product sales taxes declined by 4.2 percent. Gains of 3.1 and 0.6 percent were re-

ported for alcoholic beverage sales tax and revenue from motor vehicle and operators' licenses, respectively.

Bumpy Ride Ahead: The Behavioral Impact of the Fiscal Cliff on State Tax Revenue

As has been widely reported, the federal budget was scheduled to go over a "fiscal cliff" in January 2013 if Congress did not act. The Bush tax cuts were scheduled to expire, raising the top federal marginal tax rate on ordinary income from 35 percent to 39.6 percent, raising the marginal tax rate on most capital gains from 15 to 20 percent, and raising the tax rate on dividends from 15 percent to 39.6 percent. Interplay with other tax provisions and with the Affordable Care Act meant that some effective tax rates would increase by a further 3.8 percent or more. The American Taxpayer Relief Act enacted in January averted some of these increases but allowed the largest increases on the highest-income taxpayers to go into effect.

Throughout 2012, taxpayers knew there was a good chance that effective tax rates on some income would increase. This created incentives for federal taxpayers to minimize their expected tax burdens by shifting income and deductions and changing their behavior in other ways, to keep reported income lowest in years with highest tax rates. Because most state income taxes are based in large part on federal definitions of income and deductions, these shifts generally affect state income taxes as well.⁴

For example, the impending increase in the tax rate on capital gains created an incentive to accelerate capital gains into 2012 from 2013 and later years, taking advantage of a tax rate that likely would be lower in 2012 than in later years. Because taxable capital gains depend on taxpayer choices about when to sell assets, taxpayers have considerable flexibility over when to realize gains: This is hot money that moves quickly, and budget officers trying to understand revenue surges and declines have been burnt by it before.⁵ Similarly the scheduled increase in the tax rate on dividends created incentives for nimble closely held corporations, controlled by a small group of individuals, to take board action to pay out dividends in 2012 rather than in later years when rates would be higher. Taxpayers also faced incentives to accelerate wages, bonuses, and other forms of income into 2012 to beat anticipated higher rates, but most of this other income is more difficult to shift than capital gains and even dividends.⁶

In concept, taxpayers could have waited until the very end of 2012, reached a judgment about whether Congress would allow tax rate increases to go into effect, and shifted income if it would be advantageous. But in practice, most behavioral shifts require advance planning, such as scheduling assets sales or action by a board to increase dividends. In short, taxpayers needed to decide what to do before knowing what the federal law would be. So the shifts could occur even if the federal law did not change. Furthermore, the shifts would affect state tax revenue even if state laws do not change — if taxpayers pay a higher federal tax rate on capital gains, and they accelerate gains into 2012, states that tax capital gains will have higher tax revenue in 2012 even if their tax rates do not go up.

Did taxpayers shift income? Some states clearly think so, and external evidence suggests so as well. The California Legislative Analyst's Office assumes that 20 percent of capital gains that otherwise would be realized in 2013 will instead be accelerated into 2012, leading to a total increase in gains of 69 percent in 2012 followed by a drop of 27 percent in 2013.⁷ In its recently released budget, New York said that "the Budget Division estimate[s] another year of strong capital gains realizations with growth of 40.7 percent in 2012 followed by an expected decline of 12.0 percent in 2013, as taxpayers shifted some of their gains realizations from 2013 to 2012."⁸ Other states have remarked on this as well.⁹

Both states suggested that other kinds of income also would be shifted, at least slightly: According to New York, "The increase in marginal income tax rates for upper-income filers is believed to have induced the owners of small businesses organized as sole proprietors or partnerships to pay themselves early in order to avoid the higher tax rate. This income shifting is projected to reduce proprietors' income growth for 2013 to 3.2 percent, following 3.4 percent growth for 2012."

There is evidence that dividend income also has been shifted, although the magnitude of the shift probably is considerably smaller than with capital gains. The *New York Times* reported that Wal-Mart, Wynn Resorts, and other closely held businesses accelerated dividend payouts.¹⁰ The equities research firm Markit, speaking about special dividend payouts, noted, "The threat of higher taxes encouraged 50 companies across industries to declare specials in Q4, a big jump from a normal year's average of about 31 announcements.... Markit Dividends forecasts an additional 30 will be announced and payable prior to year-end."¹¹ Some academic research suggests that firms adjust dividend payouts in response to tax rates, particularly when the firms are held by insiders.¹²

When and how will this income shifting affect state income tax revenue? The nonwage income that is most-easily shifted is not subject to regular withholding taxes; taxpayers generally make estimated tax payments during the year to reflect expected income, and settle up when they file their tax returns, usually in April. Most states follow the federal payment schedule, with the last two estimated tax payments due in September and January. States may begin to feel a surge right about now, as those payments are processed, with the largest bump likely to occur in the April-June quarter when 2012 tax returns are filed. There is some recent evidence of this. For example, in Nebraska, December state tax revenue was 17 percent above expectations and the tax commissioner said, "There was probably a lot of capital gains selling late in the year with the uncertainty associated with what was going to happen with capital gains rates at the federal level that probably drove some people to trigger some capital gains to lock in maybe some lower rates." He noted that a substantial part of it was likely to be nonrecurring.¹³

No one can predict income-shifting behavior, or the underlying growth of capital gains, with any certainty. The California Legislative Analyst's Office noted, "the volatility in the stock

market will contribute to PIT revenues being lower or higher than reflected in our forecast in each fiscal year. Because Proposition 30 increases the dependence of the state budget on revenues paid by higher-income taxpayers, who receive most capital gains, it is likely to increase the volatility of revenues through 2018.... These issues can easily cause actual PIT revenues to be a few billion dollars lower or higher than projections in any given year."^{14,15} And New York said, "Downward pressure on equity markets from a worsening of the European sovereign debt crisis could have had a large negative effect on realizations in 2012. On the other hand, increases in the marginal tax rate on capital gains realizations from the Medicare tax surcharge and the sunset of the low rates established in the Economic Growth and Tax Relief Reconciliation Act of 2001 may result in a much larger shift of realizations from 2013 to 2012 and hence much higher realizations growth in 2012 than currently predicted. The downside risk would then be higher for 2013."

States are on a revenue roller coaster, and there is a bumpy ride ahead.¹⁶ It will be hard for states to interpret revenue data in coming months, and hard to rule out the posibility that any short-run revenue surge is simply borrowed from the future. It will be tempting to treat unexpected revenue growth as a sign of continuing economic improvement, when it could mean instead that future revenue will be lower. Caution should be the watchword.

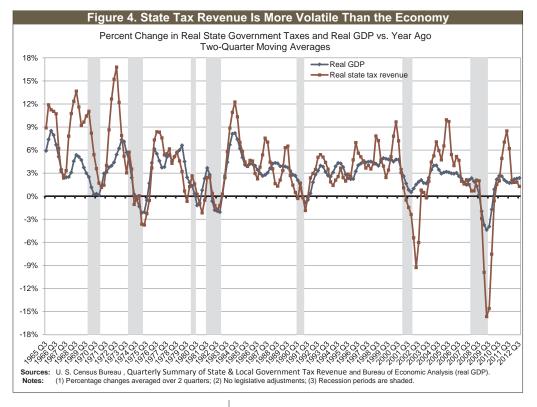
Underlying Reasons for Trends

State revenue changes result from three kinds of underlying forces: state-level changes in the economy (which often differ from national trends), the different ways in which economic changes affect each state's tax system, and legislated tax changes. The next two sections discuss the economy and recent legislated changes.

Economic Changes

Most state tax revenue sources are heavily influenced by the economy. The income tax rises when income rises, the sales tax generates more revenue when consumers increase their purchases of taxable items, and so on. When the economy booms, tax revenue tends to rise rapidly; when it declines, tax revenue tends to decline. Figure 4 shows year-over-year growth for two-quarter moving averages in inflation-adjusted state tax revenue and in real gross domestic product, to smooth short-term fluctuations and illustrate the interplay between the economy and state revenues.

Tax revenue is related to economic growth. As shown in Figure 4, in the third quarter of 2012 real state tax revenue showed 1.3 percent growth on this moving-average basis. This was the tenth consecutive quarter of growth. However, such growth has been softening in the last five quarters, and was much weaker



compared to the 6.2 percent growth reported a year ago. Real Gross Domestic Product (GDP) showed growth for the eleventh consecutive quarter at 2.4 percent. Growth in Real GDP is now slightly stronger than the 1.7 percent growth reported in the third quarter of 2011.

Yet there is volatility in tax revenue that is not explained by real GDP, a broad measure of the economy. Throughout 2011, state tax revenue has risen significantly while the overall

economy has been growing at a relatively slow pace in the wake of the Great Recession. Also, in much of 2009 and 2010, state revenue declines were much larger than the quarterly reductions in real GDP. Thus, although the growth rate in state tax revenues is not far from the growth rate in the overall economy in 2012, state tax revenues have been more volatile than the general economy in prior years.

Durable goods consumption, an important element of state sales tax bases, showed an increase of 8.4 percent in the third quarter of 2012 relative to the same quarter a year ago. The growth in durable goods was considerably stronger compared to the 6.2 percent growth reported in the same quarter of 2011. A 1.1 percent growth was reported in consumption of services, an important sector that comprises nearly 50 percent of total real GDP.¹⁷ However, the 1.1 percent growth was moderately slower compared to the 2.0 percent growth reported in the same quarter of 2011.

State-by-state data on income and consumption are not available on a timely basis, and so we cannot easily see variation across the country in these trends. Instead, like other researchers, the Rockefeller Institute relies partly on employment data from the Bureau of Labor Statistics to examine state-by-state economic conditions. These data are relatively timely and are of high quality. Table 5 shows year-over-year employment growth over the last four quarters. For the nation as a whole, employment grew for the tenth quarter in a row — by 1.4 percent relative to the previous year — in the October-December quarter of 2012. On a year-over-

Table 5. Nonfarm Employment, By State									
Year-Over-Year Percent Change, 2012									
	Jan-March	April-June	July-Sep	Oct-Dec					
United States	1.3	1.2	1.4	1.4					
New England	0.5	0.5	0.7	0.7					
Connecticut Maine	0.7	0.2	0.2	(0.1)					
	0.3	(0.2)	(0.1)	0.1					
Massachusetts	0.5	1.0	1.4	1.5					
New Hampshire	0.5	(0.1)	0.2	(0.1)					
Rhode Island Vermont	(0.3) 1.1	(0.9) 1.1	(0.8) 1.4	(0.2) 0.8					
Mid-Atlantic	1.1	1.1	1.4	0.8 1.0					
Delaware	0.2	0.2	0.0	0.4					
Maryland	1.8	1.3	1.0	0.4					
New Jersey	1.3	1.2	1.0	0.9					
New York	1.5	1.5	1.4	1.3					
Pennsylvania	0.9	0.5	0.7	0.8					
Great Lakes	0.9	0.9	1.2	1.1					
Illinois	0.6	0.5	0.7	0.7					
Indiana	1.6	1.7	2.4	2.3					
Michigan	1.5	1.4	1.3	0.6					
Ohio	1.3	1.4	2.0	1.9					
Wisconsin	(0.9)		(0.4)	0.1					
Plains	0.9	0.8	1.2	1.3					
Iowa	1.0	1.1	1.0	0.9					
Kansas	0.9	0.7	1.1	0.7					
Minnesota	1.1	0.8	1.5	1.8					
Missouri	0.2	(0.2)	0.1	1.1					
Nebraska	0.5	1.1	1.5	0.8					
North Dakota	6.6	6.6	6.3	4.4					
South Dakota	0.5	0.5	0.8	0.6					
Southeast	1.3	0.9	1.1	1.1					
Alabama	0.2	0.2	0.6	0.6					
Arkansas	0.5	0.3	0.9	0.9					
Florida	1.2	0.7	1.0	1.0					
Georgia	1.4	0.8	1.4	1.7					
Kentucky	2.1	2.0	2.2	1.9					
Louisiana	2.6	2.4	1.7	1.5					
Mississippi	0.0	(0.3)	(0.4)	0.0					
North Carolina	1.2	0.7	0.8	1.4					
South Carolina	1.6	1.1	1.1	1.8					
Tennessee	1.8	1.5	1.1	1.1					
Virginia	1.2	1.1	1.3	0.9					
West Virginia	1.9	0.9	(0.7)	(1.7)					
Southwest	2.3	2.0	2.2	2.3					
Arizona New Mexico	1.7	1.9 (0.1)	2.4	2.3					
New Mexico Oklahoma	0.7 2.7	(0.1) 2.4	(1.0) 2.7	(0.5)					
	2.7			2.3					
Texas Rocky Mountain	2.4 1.9	2.1 1.6	2.3 1.6	2.5 2.2					
Colorado	2.1	1.0 1.5	1.6	2.2 2.1					
Idaho	1.6	1.6	1.6	2.1					
Montana	(0.2)		1.0	2.2					
Utah	2.5	2.3	2.0	2.2					
Wyoming	1.2	0.7	1.1	0.3					
Far West	1.2	1.5	1.9	1.8					
Alaska	0.7	0.0	(0.1)	0.1					
California	1.4	1.6	2.1	1.9					
Hawaii	0.7	1.3	1.9	2.3					
Nevada	0.8	0.8	0.6	1.2					
Oregon	0.5	0.7	1.0	1.2					
Washington	1.6	1.7	1.9	1.9					
	Statistics (CE	S, seasonally u	nadiusted)						

year basis, employment declined in five states: Connecticut, New Hampshire, New Mexico, Rhode Island, and West Virginia. North Dakota reported the largest growth at 4.4 percent followed by Utah and Texas where employment grew by 2.8 and 2.5 percent, respectively, in the fourth quarter of 2012. In total, ten states reported growth of over 2.0 percent.

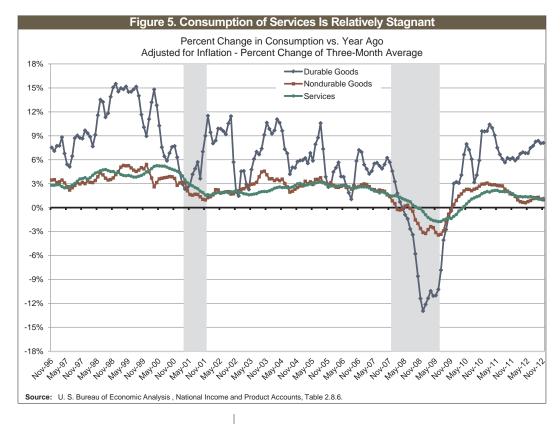
All regions reported growth in employment in the fourth quarter of 2012, but job gains are not evenly distributed among the regions. The New England region reported the weakest growth in employment at 0.7 percent. The Southwest region reported the largest increase in employment at 2.3 percent, followed by the Rocky Mountain region reporting 2.2 percent growth. These employment data are compared to the same period a year ago rather than to preceding months.

Economists at the Philadelphia Federal Reserve Bank developed broader and highly timely measures known as "coincident economic indexes" intended to provide information about current economic activity in individual states. Unlike leading indexes, these measures are not designed to predict where the economy is headed; rather, they are intended to tell us where we are now.¹⁸ These indexes can be used to measure the scope of economic decline or growth.

The analysis of coincident indexes indicates that as of December 2012, economic activity nationwide increased by 0.6 percent compared to three months earlier and by 2.7 percent compared to a year earlier. At the state level, forty-three states reported growth in economic activity compared to three months earlier, while seven states reported decline.

The number of states reporting declines in economic activity has declined considerably since August 2012. In the month of August 2012, sixteen states reported declines in economic activity. The number of states reporting declines in economic activity decreased to fifteen in the month of September, to eleven in October, and to four in November. The data underlying these indexes are subject to revision, and so tentative conclusions drawn now could change at a later date. Moreover, this analysis is based on economic activity compared to three months earlier. If we look at state economic activity compared to a year earlier, then declines are reported in two states.

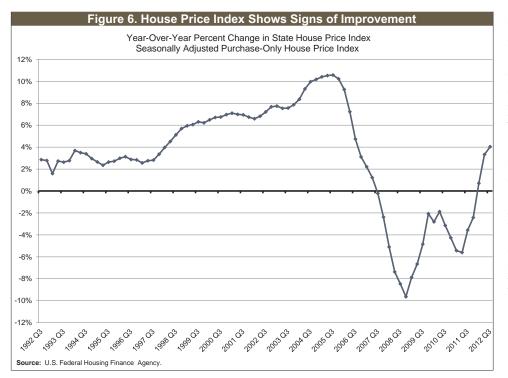
Figure 5 shows national consumption of durable goods, nondurable goods, and services – factors likely to be related to sales tax revenues. The decline in consumption of durable and nondurable goods during the recent downturn was much sharper than in the last recession. Consumption of services



remained relatively stagnant in the last few months. Growth in the consumption of durable and nondurable goods was relatively modest in the last three months.

Figure 6 shows the year-over-year percent change in the federal government's seasonally adjusted, purchase-only house price index from 1992 through the third quarter of 2012. Declines in housing prices usually lead to declines in property taxes with some lag. The

deep declines in housing prices caused by the Great Recession led to significant reductions in property taxes in the past two years.¹⁹ As Figure 6 shows, the trend in housing prices has been downward since mid-2005, with steeply negative movement from the last quarter of 2004 through the end of 2008. Housing prices



strengthened in 2009 and the first half of 2010, but the direction of change shifted downward from the second half of the 2010 to the first half of 2011. However, the trend has been upward since the second half of 2011 – with the first, second, and third quarters of 2012 showing growth of 0.7, 3.3, and 4.0 percent, respectively. Such growth is proceeding after eighteen consecutive quarter declines, which is highly encouraging.

Table	Table 6. State Tax Revenue, July-September, 2011 and 2012 (\$ in millions)							
		luly-Septer				uly-Septer		
_	PIT	CIT	Sales	Total	PIT	CIT	Sales	Total
United States	61,831	7,913	57,073	179,019	64,941	8,370	58,591	183,857
New England	4,453	760	2,354	9,862	4,544	655	2,333	9,850
Connecticut	924	83	554	2,068	978	65	482	2,014
Maine	320	53	211	803	312	37	210	792
Massachusetts	2,781	457	1,279	5,367	2,825	384	1,320	5,382
New Hampshire	13	124	NA 225	412	15	124 21	NA	441
Rhode Island Vermont	270 146	18 25	225 84	765 447	267 147	21 24	233 88	767 456
Mid-Atlantic	140 14,030	25 1,695	04 7,274	32,184	14,595	24 2,073	00 7,374	33,430
Delaware	263	44	NA	721	273	63	NA	749
Maryland	1,328	153	660	3,694	1,438	245	685	4,001
New Jersey	1,743	392	1,311	4,575	1,807	443	1,307	4,676
New York	8,460	721	2,989	15,982	8,737	922	3,055	16,666
Pennsylvania	2,236	385	2,315	7,213	2,342	401	2,327	7,337
Great Lakes	10,571	1,090	9,312	28,935	11,387	1,107	9,051	28,967
Illinois	3,523	475	2,036	8,539	3,620	562	1,994	8,555
Indiana	1,128	220	1,669	3,702	1,264	234	1,712	3,894
Michigan	2,346	180	2,827	7,686	2,606	63	2,703	7,243
Ohio	2,105	(4)	2,043	5,889	2,492	47	1,900	6,249
Wisconsin	1,468	219	737	3,120	1,405	201	741	3,025
Plains	4,834	494	3,942	12,875	5,089	536	3,973	13,280
lowa	550	31	417	1,375	572	38	436	1,428
Kansas	673	60	705	1,713	710	91	731	1,756
Minnesota	1,926	232	1,198	4,747	2,042	248	1,098	4,861
Missouri	1,153	65	781	2,537	1,193	58	787	2,595
Nebraska	440	50	355	1,046	475	50 40	379	1,122
North Dakota South Dakota	92 NA	27 29	257 229	1,054	98 NA	40 11	335 207	1,142
Southeast	11,370	29 1,728	13,975	404 37,327	11,830	1,931	14,546	377 39,001
Alabama	715	47	551	2,059	743	76	562	2,134
Arkansas	603	103	720	1,952	659	96	713	1,993
Florida	NA	422	4,561	7,805	NA	440	5,031	8,308
Georgia	2,176	97	1,272	4,101	2,234	180	1,316	4,267
Kentucky	886	141	768	2,448	902	160	761	2,543
Louisiana	681	22	730	2,230	697	78	689	2,346
Mississippi	358	68	630	1,442	361	67	645	1,456
North Carolina	2,568	279	1,502	5,530	2,688	294	1,446	5,693
South Carolina	490	35	495	1,450	529	53	517	1,526
Tennessee	2	229	1,717	2,829	4	256	1,759	2,874
Virginia	2,472	186	725	4,112	2,580	162	794	4,535
West Virginia	419	100	304	1,370	434	68	314	1,326
Southwest	1,631	248	7,520	16,310	1,675	302	8,379	17,621
Arizona	858	177	1,146	2,921	893	176	1,193	3,009
New Mexico Oklahoma	88 684	2 69	148 585	403 2,138	78 704	3 123	152 642	463 2,105
Texas	NA	NA	5,641	10,848	NA	NA	6,392	12,044
Rocky Mountain	2,165	229	1,569	5,295	2,332	304	1,653	5,586
Colorado	1,131	92	580	2,304	1,220	155	617	2,489
Idaho	276	41	328	808	288	39	350	837
Montana	220	38	NA	532	232	42	NA	533
Utah	538	58	459	1,357	592	68	494	1,441
Wyoming	NA	NA	201	293	NA	NA	191	287
Far West	12,776	1,668	11,127	36,230	13,489	1,462	11,282	36,122
Alaska	NA	192	NA	1,560	NA	242	NA	1,088
California	10,929	1,354	7,501	26,050	11,565	1,080	7,431	25,977
Hawaii	396	17	655	1,288	435	26	739	1,443
Nevada	NA	NA	274	619	NA	NA	286	618
Oregon	1,451	105	NA	2,127	1,488	114	NA	2,171
Washington	NA	NA	2,697	4,586	NA	NA	2,826	4,825
Source: U.S. Census E	Ruroau							

Source: U.S. Census Bureau.

Table 7. Quarterly Tax Revenue by Major Tax								
July-September, 2011 to 2012, Percent Change								
_	PIT	CIT	Sales	Total				
United States	5.0	5.8	2.7	2.7				
New England	2.0	(13.8)	(0.9)	(0.1)				
Connecticut	5.9	(21.1)	(13.1)	(2.6)				
Maine	(2.4)	(30.7)	(0.5)	(1.5)				
Massachusetts	1.6	(16.1)	3.1	0.3				
New Hampshire	14.7	0.1	NA	7.2				
Rhode Island	(1.1)	15.2	3.8	0.2				
Vermont	0.3	(2.1)	4.9	2.0				
Mid-Atlantic	4.0	22.3	1.4	3.9				
Delaware	3.5	41.5	NA	3.9				
Maryland	8.2	60.4	3.8	8.3				
New Jersey	3.7	13.0	(0.3)	2.2				
New York	3.3	27.8	2.2	4.3				
Pennsylvania	4.7	4.3	0.5	1.7				
Great Lakes	7.7	1.5	(2.8)	0.1				
Illinois	2.7	18.2	(2.0)	0.2				
Indiana	12.0	6.3	2.6	5.2				
Michigan	11.1	(64.9)	(4.4)	(5.8)				
Ohio	18.4	NM	(7.0)	6.1				
Wisconsin	(4.3)	(8.2)	0.6	(3.0)				
Plains	5.3	8.5	0.8	3.1				
lowa	3.9	23.9	4.5	3.8				
Kansas	5.5	52.5	3.7	2.5				
Minnesota	6.0	6.8	(8.3)	2.4				
Missouri	3.5	(11.7)	0.7	2.3				
Nebraska	8.0	(1.0)	6.7	7.3				
North Dakota	6.6	50.2	30.3	8.3				
South Dakota	NA	(61.0)	(9.6)	(6.7)				
Southeast	4.0	11.8	4.1	4.5				
Alabama	4.0	63.2	2.0	3.6				
Arkansas	9.2	(6.0)	(0.9)	2.1				
Florida	NA	4.2	10.3	6.4				
Georgia	2.7	85.2	3.5	4.0				
Kentucky	1.8	13.8	(1.0)	3.9				
Louisiana	2.3	261.6	(5.5)	5.2				
Mississippi	0.7	(2.1)	2.4	1.0				
North Carolina	4.7	5.6	(3.8)	2.9				
South Carolina	7.8	51.9	4.3	5.2				
Tennessee	98.0	12.1	2.4	1.6				
Virginia	4.4	(13.0)	9.4	10.3				
West Virginia	3.6	(31.9)	3.4	(3.2)				
Southwest	2.7	21.6	11.4	8.0				
Arizona	4.1	(0.4)	4.1	3.0				
New Mexico	(12.2)	33.2	2.5	14.9				
Oklahoma	2.9	77.7	9.8	(1.5)				
Texas	NA	NA	13.3	11.0				
Rocky Mountain	7.7	32.5	5.4	5.5				
Colorado	7.9	67.5	6.4	8.0				
Idaho	4.1	(3.9)	6.5	3.5				
Montana	5.5	8.8	NA	0.1				
Utah	10.0	17.9	7.7	6.2				
Wyoming	NA	NA	(4.9)	(2.3)				
Far West	5.6	(12.4)	1.4	(0.3)				
Alaska	NA	26.3	NA	(30.3)				
California	5.8	(20.2)	(0.9)	(0.3)				
Hawaii	10.0	49.4	12.8	12.1				
Nevada	NA	NA	4.6	(0.3)				
Oregon	2.5	8.2	NA	2.1				
Washington	NA	NA	4.8	5.2				
Source: U.S. Census B	ureau.							

NM = Not Meaningful.

Tax Law Changes Affecting This Quarter

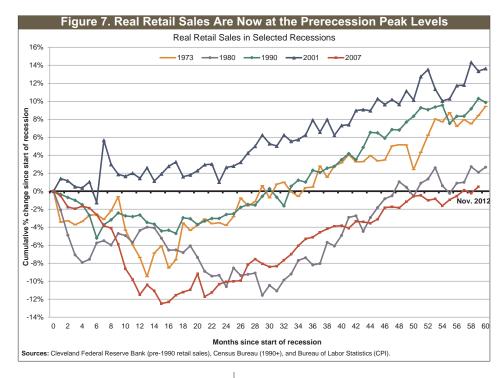
Another important element affecting trends in tax revenue growth is changes in states' tax laws. During the July-September 2012 quarter, enacted tax increases and decreases produced an estimated gain of \$1.7 billion compared to the same period in 2011.²⁰ Enacted tax changes increased personal income tax for approximately \$1.6 billion, decreased sales tax by \$212 million, decreased corporate income taxes by \$22 million, and decreased some other taxes by \$69 million.

Among the enacted tax changes, the most noticeable ones are the increase of personal income tax rates in California for higher income taxpayers, the restructuring of personal income tax brackets in New York, and temporary sales tax increases in Arizona and California.

The Impact of Two Major Taxes

States rely on the sales tax for about 30 percent of their tax revenue, and it was hit far harder during and after the last recession than in previous recessions. Retail sales and consumption are major drivers of sales taxes. Figure 7 shows the cumulative percentage change in inflation-adjusted retail sales in the sixty months following the start of each recession from 1973 forward.²¹ Real retail sales in the Great Recession (the solid red line) plummeted after December 2007, falling sharply and almost continuously until December 2008, by which point they were more than 10 percent below the prerecession peak. This was deeper than in most recessions, although the declines in the 1973 and 1980 recessions also were quite sharp. While real retail sales have been rising from their lows for more than two years now, at the end of November they were only slightly above the prerecession levels.

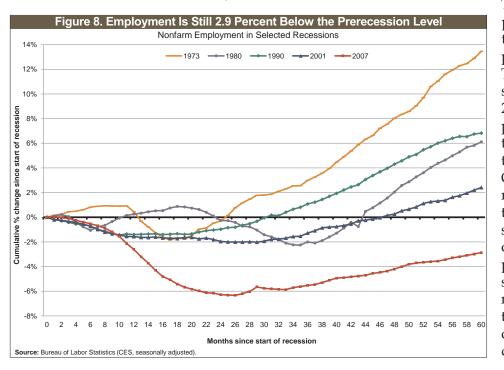
States on average count on the income tax for about 36 percent of their tax revenue. Employment and associated wage payments are major drivers of income taxes. Figure 8 shows the cumulative percentage change in nonfarm employment for the nation as a whole in the sixty months following the start of each recession from 1973 forward.²² The last point for the 2007 recession is December 2012, month sixty. As the graph shows, the 2.9 percent employment drop as of December 2012 is still far worse than declines seen in and around previous recessions. The trends depicted in Figure 8 suggest that, unless the pace of growth accelerates, it may take several years before employment attains its prerecession peak.



State Tax Revenues Compared to Their Peak Levels

In this report, we augment analysis of recent trends in state tax revenues with analysis of revenues for fiscal 2012 compared to their prerecession peak levels. Table 8 shows the percent change for each state's total tax collections from its peak level to fiscal year 2012. Table 8 shows similar data for sales and personal income taxes. In addition, Table 8 shows sales and personal income taxes as shares of total taxes for each state. Table 9 provides the peak year for total taxes as

well as sales and personal income taxes for each individual state. The numbers in Table 8 indicate that overall state tax revenues are slowly recovering from the deep declines caused by the Great Recession. At the end of fiscal 2012, overall tax collections were 1.3 percent above the peak tax collections levels, sales tax collections were 1.1 percent above, while personal income tax collections were still 0.4 percent below the peak levels. The extent of revenue recovery varies dramatically among the states.



Twenty-seven states reported fiscal 2012 collections that were higher than previous peak levels. Twenty-five states reported sales tax collections in fiscal 2012 that surpassed earlier peak revenues, and fourteen did so with regard to the personal income tax. Overall, twenty-two states reported fiscal 2012 total tax collections that were still below peak levels; nine of those by double-digit percentages. In terms of sales tax collections, revenue collections were below the peak levels in 20 states, of which seven states saw double-digit declines. The

Table 8. Change From Peak to FY 2012 in State Tax Collections								
		from peak year t		Share of total tax	. FY 2012			
State	Total tax	Sales tax	PIT	Sales	PIT			
United States	1.3	1.1	(0.4)	31%	35%			
Alabama	(2.1)	(0.6)	(2.0)	26%	34%			
Alaska	(19.4)	N/A	N/A	N/A	N/A			
Arizona	(21.0)	(29.1)	(17.4)	41%	27%			
Arkansas	10.1	(3.3)	2.4	34%	29%			
California	(1.4)	(3.6)	(7.5)	27%	45%			
Colorado	(0.1)	(0.4)	(4.3)	24%	50%			
Connecticut	10.5	6.0	7.6	24%	48%			
Delaware	14.1	N/A	14.9	N/A	35%			
Florida	(15.2)	(15.1)	N/A	57%	N/A			
Georgia	(11.3)	(13.0)	(7.9)	32%	50%			
Hawaii	6.6	3.0	(1.3)	49%	28%			
Idaho	(7.6)	(9.1)	(15.7)	36%	36%			
Illinois	20.6	1.2	60.2	22%	46%			
Indiana	2.5	6.7	(1.5)	43%	31%			
Iowa	3.6	0.3	(1.4)	30%	39%			
Kansas	4.5	24.7	(0.8)	38%	39%			
Kentucky	4.2	6.1	0.8	29%	34%			
Louisiana	(21.0)	(16.1)	(24.0)	34%	28%			
Maine	(0.2)	0.4	(7.7)	28%	38%			
Maryland	6.4	5.8	(0.9)	24%	41%			
Massachusetts	2.0	25.0	(4.5)	23%	53%			
Michigan	(5.9)	15.7	(2.8)	40%	30%			
Minnesota	12.2	8.6	2.7	24%	39%			
Mississippi	1.9	(4.5)	(3.2)	44%	22%			
Missouri	(0.7)	(5.2)	0.3	29%	47%			
Montana	0.1	N/A	3.5	N/A	37%			
Nebraska	3.8	(5.1)	6.5	33%	42%			
Nevada	2.5	1.1	N/A	50%	N/A			
New Hampshire	(3.3)	N/A	(30.8)	N/A	4%			
New Jersey	(15.6)	(16.9)	(16.2)	29%	41%			
New Mexico	(19.5)	(14.0)	(23.8)	37%	21%			
New York	7.9	5.4	5.2	17%	55%			
North Carolina	(0.6)	5.8	(5.5)	25%	46%			
North Dakota	NM	84.9	16.8	20%	8%			
Ohio	(0.8)	1.9	(5.5)	31%	36%			
Oklahoma	2.3	11.7	(0.5)	28%	33%			
Oregon	11.3	N/A	4.1	N/A	68%			
Pennsylvania	2.7	3.3	(3.0)	28%	31%			
Rhode Island	3.0	(3.1)	(2.1)	30%	37%			
South Carolina	(13.5)	(9.5)	(21.9)	39%	35%			
South Dakota	12.2	10.8	N/A	56%	N/A			
Tennessee	3.1	1.0	(37.4)	58%	2%			
Texas	7.9	13.3	N/A	50%	N/A			
Utah	(4.9)	(5.5)	(4.9)	32%	42%			
Vermont	6.8	0.9	(3.9)	12%	22%			
Virginia	(3.4)	(4.1)	(0.2)	19%	57%			
Washington	(2.2)	(5.9)	N/A	61%	N/A			
West Virginia	10.2	12.0	12.6	24%	33%			
Wisconsin	7.2	0.5	7.1	27%	42%			
Wyoming	(16.6)	(24.4)	N/A	32%	N/A			
Source: Pockofollor	Institute analysis of (

Source: Rockefeller Institute analysis of Census Bureau data.

N/A = not applicable.

NM = Not meaningful; tax revenues showed continuous growth.

Table 9. Peak Years for State Tax Collections							
State	Total Taxes	Sales	PIT				
United States	2008	2008	2008				
Alabama	2008	2008	2008				
Alaska	2008	N/A	N/A				
Arizona	2007	2007	2007				
Arkansas	2008	2007	2008				
California	2008	2007	2008				
Colorado	2008	2008	2008				
Connecticut	2008	2008	2008				
Delaware	2008	N/A	2007				
Florida	2006	2007	N/A				
Georgia	2007	2007	2007				
Hawaii	2008	2008	2008				
Idaho	2008	2008	2008				
Illinois	2007	2008	2008				
Indiana	2007	2000	2008				
lowa	2009	2000	2008				
Kansas	2003	2003	2008				
Kentucky	2008	2008	2008				
Louisiana	2008	2000	2000				
Maine	2008	2007	2007				
Maryland	2008	2008	2008				
Massachusetts	2008	2009	2008				
Michigan	2008	2008	2008				
Minnesota							
	2008	2008	2008				
Mississippi Missouri	2008	2007 2007	2008				
Montana	2008	2007 N/A	2008				
	2008		2008				
Nebraska	2008	2008	2008				
Nevada	2007	2007	N/A				
New Hampshire	2008	N/A	2008				
New Jersey	2008	2008	2008				
New Mexico	2007	2007	2008				
New York	2008	2008	2009				
North Carolina	2008	2008	2008				
North Dakota	2012*	2009	2009				
Ohio	2008	2008	2008				
Oklahoma	2008	2009	2008				
Oregon	2007	N/A	2007				
Pennsylvania	2008	2008	2008				
Rhode Island	2007	2007	2008				
South Carolina	2007	2007	2008				
South Dakota	2009	2009	N/A				
Tennessee	2008	2008	2008				
Texas	2008	2008	N/A				
Utah	2008	2008	2008				
Vermont	2007	2008	2008				
Virginia	2007	2007	2007				
Washington	2008	2008	N/A				
West Virginia	2008	2007	2009				
Wisconsin	2008	2008	2008				
Wyoming	2009	2009	N/A				

Source: Rockefeller Institute analysis of Census Bureau data. *Tax revenues showed continuous growth. largest declines were in Arizona and Wyoming, where sales tax collections were down by 29.1 and 24.4 percent, respectively, in fiscal 2012 compared to their peak levels. The picture is even more dire for personal income tax collections despite strong growth in the last year or so. Among forty-three states with personal income taxes, twenty-nine states reported declines in personal income tax collections in fiscal 2012 compared to their peak levels, with eight states reporting double-digit declines.

Among individual states, Arizona and Louisiana reported the largest declines at the end of fiscal 2012 compared to their peak revenue levels. In both states, overall tax collections were 21 percent below at the end of fiscal 2012 compared to peak tax collections levels. In addition, sales tax and personal income tax combined makes up over 60 percent of total taxes both in Arizona and Louisiana. In fiscal 2012, both states reported double-digit declines in sales tax collections and personal income tax collections compared to peak revenue collections reported in 2007.

Total state tax revenue collections in fiscal 2012 were above the peak levels only in nominal terms. The tax revenues are far from the peak levels if we adjust the numbers for inflation — nationwide tax receipts were 4.9 percent lower in 2012 compared to peak levels reported in 2008. In addition, inflation-adjusted figures indicate that only twelve states had higher tax receipts at the end of fiscal 2012 compared to their peak revenue collections levels.

In response to the Great Recession, many states took unwanted but necessary actions to balance budgets steps such as tax increases, cuts in public services, and reductions in employee compensation. Most have also drawn heavily from rainy day funds, and many have used steps such as agency consolidations and employee furloughs to achieve some relatively modest savings. However, such actions served as temporary solutions and, while they helped to balance budgets, they also pushed some fiscal problems into subsequent fiscal years.

Looking Ahead

Preliminary data for the October-November months of 2012 suggest that tax conditions continued to improve further in the fourth quarter of 2012, although, as we discuss in "Bumpy Ride Ahead: The Behavioral Impact of the Fiscal Cliff on State Tax Revenue," some of this year's revenue growth may be artificially boosted, at the expense of later years. With early data for October-November 2012 now available for forty-five states, tax revenue increased by 5.8 percent compared to the same months of the previous year. According to the preliminary data, personal income tax collections grew by 7.8 percent and sales tax collections by 5.7 percent.

Starting at the end of calendar year 2008 and extending through 2009, states suffered five straight quarters of decline in tax revenues. They now have enjoyed eleven consecutive periods of growth, and the fourth quarter of 2012 will most likely extend the string to twelve. Overall, tax revenues across the states are improving but states continue to face significant long-term fiscal challenges.

Analysis of economic factors suggests that state tax revenues are recovering, but not as quickly as the broader economy is improving. This reflects the fact that states do not tax the broad economy: their tax systems are much more reliant on narrower and more volatile forms of economic activity — and forms that, in this environment, have not been recovering as quickly as the broad economy.

State tax revenues became more volatile in the last decade. Moreover, the temporary solutions to address budget shortfalls caused by the Great Recession, might have contributed to further growth of revenue volatility. States should revisit the composition of tax their tax structures and consider broadening tax bases to achieve more predictable and less volatile tax revenues.

About The Nelson A. Rockefeller Institute of Government's Fiscal Studies Program

The Nelson A. Rockefeller Institute of Government, the public policy research arm of the University at Albany, State University of New York, was established in 1982 to bring the resources of the 64-campus SUNY system to bear on public policy issues. The Institute is active nationally in research and special projects on the role of state governments in American federalism and the management and finances of both state and local governments in major areas of domestic public affairs.

The Institute's Fiscal Studies Program, originally called the Center for the Study of the States, was established in May 1990 in response to the growing importance of state governments in the American federal system. Despite the ever-growing role of the states, there is a dearth of high-quality, practical, independent research about state and local programs and finances.

The mission of the Fiscal Studies Program is to help fill this important gap. The Program conducts research on trends affecting all fifty states and serves as a national resource for public officials, the media, public affairs experts, researchers, and others.

This report was researched and written by Lucy Dadayan, senior policy analyst, and Donald J. Boyd, senior fellow. Thomas Gais, director of the Institute provided valuable feedback on the report. William Sisk, graduate research assistant, assisted with data collection. Michael Cooper, the Rockefeller Institute's director of publications, did the layout and design of this report, with assistance from Michele Charbonneau.

You can contact Lucy Dadayan at <u>ldadayan@albany.edu</u>.

Where Do We Stand Now?

As we have noted in prior revenue reports, state tax revenue has begun to recover slowly and has now grown on a year-over-year basis for eleven consecutive quarters. This certainly is good news, but sometimes it is interpreted as meaning that state finances have recovered almost fully, and that is not correct.

States suffered dramatic declines in all major taxes. Figure 9 shows the cumulative percentage change in state tax revenue since the start of each of the last three recessions, after adjusting for inflation and smoothing the data by averaging over four quarters. State tax revenues declined insignificantly during the 1990 recession and much more substantially during the 2001 recession. However, the impact of the Great Recession on state tax revenues collections was much worse. Nearly five years after the start of the Great Recession, state tax revenues remain below pre-recession levels. The decline in state tax revenues was much deeper and longer and the recovery has been much slower.

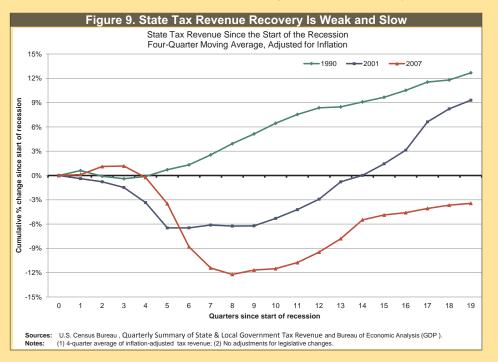
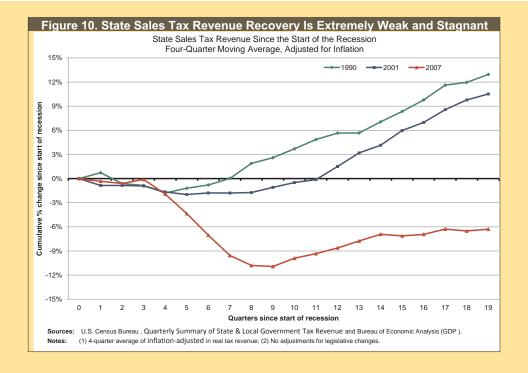
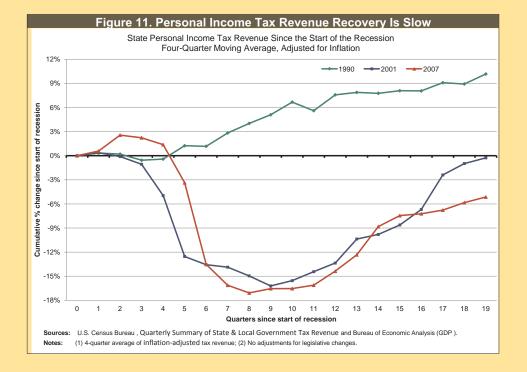


Figure 10 on the next page shows the same thing for state sales tax collections. The sales tax remains more than 6 percent below its level at the start of the recession. Consumer spending, particularly on taxable goods, has recovered weakly. As a result, sales tax collections have been relatively stagnant in the last year.

Figure 11 on the next page repeats the analysis for state personal income tax collections. The personal income tax has recovered substantially from its lowest level but is still about 5 percent below where it was at the start of the recession. Its recovery is in part an artifact of large tax increases imposed in several states, particularly California, Illinois, and New York; without those increases it would look weaker still.

In sum, while state tax revenues are recovering, they remain below their prior peak and well below where previous trends would have suggested. Furthermore, recent economic and revenue trends suggest tax revenue may weaken in coming months. While the Great Recession ended over three years ago, the damage caused by the Great Recession on state tax revenues is significant and it will take years before the states fully recover.





Adjustments to Census Bureau Tax Collection Data

The numbers in this report differ somewhat from those released by the Bureau of the Census in December of 2012. For reasons we describe below, we have adjusted Census data for selected states to arrive at figures that we believe are best-suited for our purpose of examining underlying economic and fiscal conditions. As a result of these adjustments, we report a year-over-year increase in tax collections of 2.7 percent in the third quarter, compared with the 2.9 percent increase that can be computed from data on the Census Bureau's Web site (www.census.gov/govs/www/qtax.html). In this section we explain how and why we have adjusted Census Bureau data, and the consequences of these adjustments.

The Census Bureau and the Rockefeller Institute engage in two related efforts to gather data on state tax collections, and we communicate frequently in the course of this work. The Census Bureau has a highly rigorous and detailed data collection process that entails a survey of state tax collection officials, coupled with Web and telephone follow-up. It is designed to produce, after the close of each quarter, comprehensive tax collection data that, in their final form after revisions, are highly comparable from state to state. These data abstract from the fund structures of individual states (e.g., taxes will be counted regardless of whether they are deposited to the general fund or to a fund dedicated for other purposes such as education, transportation, or the environment).

The Census Bureau's data collection procedure is of high quality, but is labor-intensive and time-consuming. States that do not report in time, do not report fully, or that have unresolved questions may be included in the Census Bureau data on an estimated basis, in some cases with data imputed by the Census Bureau. These imputations can involve methods such as assuming that collections for a missing state in the current quarter are the same as those for the same state in a previous quarter, or assuming that collections for a tax not yet reported in a given state will have followed the national pattern for that tax. In addition, state accounting and reporting for taxes can change from one quarter to another, complicating the task of reporting taxes on a consistent basis. For these reasons, some of the initial Census Bureau data for a quarter may reflect estimated amounts or amounts with unresolved questions, and will be revised in subsequent quarters when more data are available. As a result, the historical data from the Census Bureau are comprehensive and quite comparable across states, but on occasion amounts reported for the most recent quarter may not reflect all important data for that quarter.

The Rockefeller Institute also collects data on tax revenue but in a different way and for different reasons. Because historical Census Bureau data are comprehensive and quite comparable, we rely almost exclusively on Census data for our historical analysis. Furthermore, in recent years Census Bureau data have become far more timely and where practical we use them for the most recent quarter as well, although we supplement Census data for certain purposes. We collect our own data on a monthly basis so that we can get a more current read on the economy and state finances. For example, as this report goes to print we have data on tax collections in October and November in forty-five states — not enough to use as the basis for a comprehensive report, but useful in understanding what is happening to state finances.

In addition, we collect certain information that is not available in the Census Data — figures on withholding tax collections and payments of estimated income tax, both of which are important to understanding income tax collections more fully. Our main uses for the data we collect are to report more frequently and currently on state fiscal conditions, and to report on the income tax in more detail.

Ordinarily there are not major differences between our data for a quarter and the Census data. Normally we use the Census data without adjustment for full quarterly *Revenue Reports*. In the last year states have been slow in reporting tax revenues to the Census Bureau on a timely manner due to furloughs and reduced workforce. For example, for the July-September quarter the Census Bureau did not receive data for ten states and reported estimated figures for those ten states. Therefore, we have made some adjustments to the Census data. Table 10 shows the year-over-year percent change in national tax collections for the following sources: (1) preliminary figures collected by the Rockefeller Institute that appeared in our "Data Alert" dated December 13, 2012; (2) preliminary figures as reported by the Census Bureau; and (3) the Census Bureau's preliminary figures with selected adjustments by the Rockefeller Institute.

Table 10. RIG vs. Census Bureau Quarterly Tax Revenue By Major Tax							
July-September, 2011 to 2012, Percent Change							
	PIT	CIT	Sales	Total			
RIG Data Alert	4.5	(0.5)	3.1	2.1			
Census Bureau Preliminary	4.5	8.3	3.3	2.9			
Census Bureau Preliminary with RIG Adjustments	5.0	5.8	2.7	2.7			

The last set of numbers with our adjustments is what we use as the basis for this report. For the third quarter of 2012, we made adjustment for eleven states — Georgia, Indiana, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Oregon, Washington, and Wisconsin – based upon data and information provided to us directly by these states. For ten of these eleven states the Census Bureau had not received a response in time for its publication and so used imputed data that will be revised in later reports. However, the Institute obtained data from all ten; these data may not be as comprehensive as what would be used by the Census Bureau, but we believe they provide a better picture of fiscal conditions than imputed data. In addition, we revised preliminary data reported by the Census Bureau for tax collections in Maryland in the third quarter of 2012 based on information obtained from the state. We also made adjustments to tax collections for some previous quarters and for some states where Census Bureau reported imputed or preliminary figures. For example, we made adjustments to tax numbers for the second quarter of 2012 for the following ten states: California, Georgia, Kansas, Maryland, Massachusetts, New Jersey, New Mexico, Rhode Island, Washington, and Wisconsin. For six of these ten states (Georgia, Massachusetts, New Jersey, New Mexico, Rhode Island, and Washington) the Census Bureau still did not receive revenue data from the states and reported estimated data.

Endnotes

- 1 We made adjustments to Census Bureau data for the third quarter of 2012 for eleven states Georgia, Indiana, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Oregon, Washington, and Wisconsin – based upon data and information provided to us directly by these states. In addition, we made adjustments to tax numbers for the second quarter of 2012 for the following ten states – California, Georgia, Kansas, Maryland, Massachusetts, New Jersey, New Mexico, Rhode Island, Washington, and Wisconsin. These revisions together account for some noticeable differences between the Census Bureau figures and the Rockefeller Institute estimates.
- 2 We have adjusted the historical data for local property tax revenue as reported by the Census Bureau, revising the data for the third quarter of 2008 and earlier periods upward by 7.7 percent, consistent with the higher level of property tax revenue in the new sample compared with the previous sample, as reported in the Census Bureau's "bridge study." For more information on methodological changes to the local property tax and the results of the bridge study, please see: http://www2.census.gov/govs/qtax/bridgestudy.pdf.
- 3 Preliminary figures for October-November 2012 are not available for the following five states: Hawaii, Minnesota, Nevada, New Mexico, and Wyoming. Total tax collections for these five states combined represent about 5-6 percent of nationwide tax collections. Therefore, it is unlikely that the nationwide picture for collections during these two months will change once we have complete data for all fifty states for the months of October and November of 2012.

- 4 For descriptions of state income tax linkages to the federal system, see Rick Olin and Sandy Swain, *Individ-ual Income Tax Provisions in the States* (Madison, WI: Wisconsin Legislative Fiscal Bureau, January 2011), http://legis.wisconsin.gov/lfb/publications/Informational-Papers/Documents/2009/4_individual%20income%20tax%20provisions%20in%20the%20states.pdf and also Federation of Tax Administrators, *State Personal Income Taxes: Federal Starting Points* (Washington, DC: Federation of Tax Administrators, January 2013), http://www.taxadmin.org/fta/rate/stg_pts.pdf.
- 5 For an analysis of state reliance on capital gains, see pp. 20-25 of Donald J. Boyd and Lucy Dadayan, *Revenue Declines Less Severe, But States' Fiscal Crisis Is Far From Over*, State Revenue Report #79 (Albany, NY: The Nelson A. Rockefeller Institute of Government, April 2010), http://www.rockinst.org/pdf/government_finance/state_revenue_report/2010-04-16-SRR_79.pdf.
- 6 For additional discussion of this issue see Pamela M. Prah, "Fiscal Cliff Jitters Could Boost Early State Tax Revenue," Stateline WEb site, December 17, 2012, <u>http://www.pewstates.org/projects/stateline/headlines/fiscal-cliff-jitters-could-boost-early-state-tax-reve</u> <u>nue-85899436914</u>; Norton Francis, "What the Fiscal Cliff Deal Means for the States, Tax Policy Center Web site, January 11, 2013, <u>http://taxvox.taxpolicycenter.org/2013/01/11/what-the-fiscal-cliff-deal-means-for-the-states/</u>; and Peter J. Reilly, "Who Should Be Accelerating Income Into 2012?" Forbes.com, December 2, 2012, <u>http://www.forbes.com/sites/peterjreilly/2012/12/02/who-should-be-accelerating-income-into-2012</u>.
- 7 See p. 23 of Mac Taylor, *The 2013-14 Budget: California's Fiscal Outlook* (Sacramento, CA: California Legislative Analyst's Office, November 2012), http://www.lao.ca.gov/reports/2012/bud/fiscal-outlook/fiscal-outlook-2012.aspx.
- 8 NYS Division of the Budget, 2013-14 Executive Budget: Economic and Revenue Outlook (Albany, NY: New York State Division of the Budget, January 2013), pp. 152-6, <u>http://publications.budget.ny.gov/eBudget1314/economicRevenueOutlook/economicRevenueOutlook.pd</u> <u>f</u>.
- 9 For example, see Minnesota's November 2012 forecast, at http://www.beta.mmb.state.mn.us/doc/fu/12/summary-nov12.pdf.
- 10 Nathaniel Popper and Nelson D. Schwartz. "Investors Rush to Beat Threat of Higher Taxes," New York Times, November 18, 2012. <u>http://www.nytimes.com/2012/11/19/business/investors-rush-to-beat-threat-of-higher-taxes.html</u>.; Nathaniel Popper, "Early Dividend for Wal-Mart Is Latest Move in Tax Scramble." New York Times, November 19, 2012, <u>http://www.nytimes.com/2012/11/20/business/economy/early-dividend-for-wal-mart-is-latest-move-in-tax-scramble.html</u>.
- 11 Will Duff Gordon, Equities: "Spike in Special Dividends Projected for Q4 2012" (London, UK: Markit Equities Research, November 12, 2012. <u>http://www.markit.com/assets/en/docs/commentary/securities-finance/2012/News%20-%20special%20</u> <u>Div%20predictions%20for%20Q4%20-%20FINALHB.pdf</u>.
- 12 Michelle Hanlon and Jeffrey L. Hoopes. "What Do Firms Do When Dividend Tax Rates Change? An Examination of Alternative Payout Responses to Dividend Tax Rate Changes," Draft, May 23, 2012, <u>http://papers.srn.com/sol3/papers.cfm?abstract_id=2065628</u>.
- 13 Brent Martin, "State Tax Revenue Surges to End 2012," Nebraska Radio Network, January 10, 2013, http://nebraskaradionetwork.com/2013/01/10/state-tax-revenue-surges-to-end-2012/.
- 14 Taylor, *The 2013-14 Budget: California's Fiscal Outlook*.
- 15 California's LAO makes the point that increased reliance on high-income earners will make California's income tax more volatile and difficult to predict. That is undoubtedly correct. However, recent research suggests that progressivity explains relatively little of how states were affected by the Great Recession, and that how the recession affected different state economies played a much greater role in determining how state tax revenue was affected by the recession. See Howard Chernick, Cordelia Reimers, and Jennifer Tennant, "Tax Structure and Revenue Instability: The Great Recession and the States," Preliminary Draft, January 3, 2013, http://www.russellsage.org/sites/all/files/Chernick%20et%20al%20Tax%20Structure%20and%20Revenue%20Instability%201-3-13.pdf.

- 16 For selected previous analysis, see the Pew Center on the States and the Nelson A. Rockefeller Institute of Government, *States' Revenue Estimating: Cracks in the Crystal Ball* (Washington DC and Albany, NY: Pew Center on the States and the Nelson A Rockefeller Institute of Government, March 2011), <u>http://www.rockinst.org/pdf/government_finance/2011-03-01-States_Revenue_Estimating_Report.pdf</u>; Rick Mattoon and Leslie McGranahan, "Revenue Bubbles and Structural Deficits: What's a State to Do?" Working Paper Series (Chicago, IL: Federal Reserve Bank of Chicago, 2008, revised April 2012), <u>http://www.chicagofed.org/webpages/publications/working_papers/2008/wp_15.cfm</u>.
- 17 See Bureau of Economic Analysis, National Income and Products Accounts Table (Table 1.1.11).
- 18 For a technical discussion of these indexes and their national counterpart, see Theodore M. Crone and Alan Clayton-Matthews. "Consistent Economic Indexes for the 50 States," *Review of Economics and Statistics* 87, 4 (2005), pp. 593-603; Theodore M. Crone, "What a New Set of Indexes Tells Us About State and National Business Cycles," *Business Review*, Federal Reserve Bank of Philadelphia (First Quarter 2006), http://www.philadelphiafed.org/research-and-data/publications/business-review/2006/q1/Q1_06_NewIndexes.pdf; and James H. Stock and Mark W. Watson, "New Indexes of Coincident and Leading Economic Indicators," *NBER Macroeconomics Annual* (1989), pp. 351-94. The data and several papers are available at www.philadelphiafed.org/econ/indexes/coincident.
- 19 For more discussion of the relationship between property tax and housing prices see Lucy Dadayan, *The Impact of the Great Recession on Local Property Taxes* (Albany, NY: The Nelson A. Rockefeller Institute of Government, July 2012), https://www.common.com/articles/arti

http://www.rockinst.org/pdf/government_finance/2012-07-16-Recession_Local_%20Property_Tax.pdf.

- 20 Rockefeller Institute analysis of data from the National Association of State Budget Officers.
- 21 This treats the 1980-82 "double-dip" recession as a single long recession.
- 22 Ibid.