State Fiscal Issues and Risks at the Start of a New Century

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Fiscal Studies Program
The Nelson A. Rockefeller Institute of Government

Funding Provided by The Smith Richardson Foundation

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Printed in the United States of America

The Nelson A. Rockefeller Institute of Government
411 State Street
Albany, New York 12203-1003

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Introduction

States have been flush with revenue during the mid and late 1990's. The economy has been stronger than expected, financial markets have boomed, and inflation has been benign. Taxes consistently have come in above expectations, spending has fallen below projections, and states have had unbudgeted surpluses year after year. They have responded to this good news by increasing spending significantly, by cutting taxes for six consecutive years, and by increasing reserves to 20-year highs. It is a pleasant time to be a governor or legislator.

Is everything as rosy under the surface as it appears? Is the outlook for state finances as attractive as the recent past? What risks are lurking, and what significant longer-term trends are emerging? That is the subject of this report.

We begin by discussing the composition of state revenue and spending, to focus ourselves on the numbers that are biggest and that matter most in state finances. We then review recent studies of the outlook for state finances before launching into our own analysis. In our analysis we focus on key fiscal issues and risks for states, rather than attempting to develop a specific quantitative outlook. Finally, we assess what we have learned.

The Composition of State Revenue and Spending

State Revenue Structures

In 1997 state general revenue totaled $815 billion.[1] States raised $584 billion of this on their own from taxes, charges, and tuition, with intergovernmental revenue, mostly from the federal government, accounting for the remaining $231 billion. Table 1 on the next page shows the composition of state revenue in 1997.

Income and sales taxes are tied for first place, each accounting for approximately 18 percent of general revenue. The income tax has been gaining on the sales tax in relative importance throughout the 1990's, and data from the Rockefeller Institute of Government suggests that the income tax grew considerably faster than the sales tax in 1998 and 1999, and now is larger than the sales tax.

Intergovernmental revenue consists primarily of aid from the federal government. More than half of this aid is for programs classified by the U.S. Census Bureau as "public welfare" programs, the largest of which is Medicaid, a program that finances medical assistance for the poor and medically needy Temporary Assistance for Needy Families (TANF) also is included in "public welfare" but it is dwarfed by Medicaid. The next-largest category is aid for education, accounting for 15 percent of intergovernmental revenue, followed by highway aid (8 percent), aid for health and hospitals (5 percent), and a constellation of smaller programs.

Table 1
Composition of State Revenue in 1997

	Amount ($ billions)	*Share*
General Revenue	**$814.6**	**100.0%**
Taxes	443.3	54.4
General sales tax	147.1	18.1
Individual income tax	144.7	17.8
Selective sales taxes	68.7	8.4
Corporate income taxes	30.7	3.8
Other taxes	52.3	6.4
Charges, fees, and other own-source revenue	140.5	17.2
Intergovernmental revenue	230.9	28.3

Source: U.S. Bureau of the Census

States vary considerably in their composition of revenue. Nine states impose little or no income tax (Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming impose no income tax, and New Hampshire and Tennessee impose de minimis taxes), while at the other extreme Massachusetts and Oregon rely on the income tax for about 30 percent of their total revenue (and Oregon relies on the income tax for slightly more than two-thirds of its *tax* revenue). Similarly, five states do not impose a sales tax (Alaska, Delaware, Montana, New Hampshire, and Oregon), while Florida, Nevada and Washington rely on the sales tax for 35-40 percent of revenue (with Washington relying on the sales tax for nearly 60 percent of *tax* revenue).

Not surprisingly, states that do not have an income tax usually rely heavily on the sales tax, and states that do not have a sales tax usually rely heavily on the income tax. Two notable exceptions, Alaska and New Hampshire, have neither an income tax nor a sales tax. Alaska relies heavily on oil-related taxes and royalties and New Hampshire simply does less than most state governments, relying almost exclusively on local governments to finance elementary and secondary education rather than raising state revenue for this purpose.

State Spending By Function

The single-largest area of state spending is elementary and secondary education, accounting for $160 billion, or 20 percent, of state general expenditures in 1997.[2] Most of state elementary and secondary education spending is for payments to local school districts. The second-largest spending area, at 16 percent of general expenditures, is public welfare payments for medical services, consisting mostly of Medicaid payments (the federal-state medical program for the poor and medically needy). This area overtook higher education as the number two spending area early in the decade. Higher education rounds out the big three at 12 percent of the total. Highways, traditional welfare programs, health, hospitals, and corrections are the next-largest spending areas, but all are considerably smaller than the top three areas. The cash assistance component of welfare is notable for its surprisingly small size relative to its importance in policy debates – cash assistance

accounted for less than three percent of state spending in 1997, and no doubt has shrunk considerably since then due to continuing dramatic declines in caseloads.[3]

The table below shows spending by major functional area:

Table 2
Composition of State Expenditures in 1997

	Amount ($ billions)	*Share*
General expenditure	**$788.2**	**100.0%**
Elementary and secondary education	160.3	20.3
Public welfare: medical payments	127.9	16.2
Higher education	90.5	11.5
Highways	60.2	7.6
Cash assistance and non-medical welfare assistance	47.9	6.1
Health	33.9	4.3
Hospitals	29.3	3.7
Corrections	29.0	3.7
All other	209.1	26.5

Source: U.S. Bureau of the Census

The composition of state spending varies considerably across states, reflecting different tastes for public goods, different splits of state and local responsibility, different costs, and different demographic and economic characteristics. For example, elementary and secondary education ranges from a high of 28 percent of state spending in Michigan to a low of six percent of spending in New Hampshire, and the medical component of welfare spending (which includes Medicaid and certain other spending) ranges from 24 percent of state spending in New York to seven percent of spending in Alaska.[4]

Recent Studies of the Fiscal Outlook for States

There have been two recent comprehensive studies of the outlook for state and local finances.

The Finance Project Study

In December 1995 The Finance Project released "The Effects of Economic and Demographic Changes on States and Local Budgets," prepared by Sally Wallace of Georgia State University.[5] The study examined key demographic and economic forces that might affect state and local finances and concluded that "state and local governments will be faced with slower-growing revenue sources, while public-service demand shifts its focus toward the elderly."[6]

The study did not develop state-by-state projections of the fiscal outlook, but focused instead on major forces underlying the outlook for state and local finances. The key assumptions behind the report's conclusion were:

- Real per-capita income growth would slow progressively in coming years, based on projections prepared by the U.S. Department of Commerce's Bureau of Economic Analysis.
- Wages, interest, and dividend income would grow less quickly than income from transfer payments such as Social Security benefits, Medicaid benefits, and income maintenance. (This is important because wages, interest, and dividends generally are taxed by states, and transfers generally are not taxed.) This assumption was based largely on projections of an aging population with increasing retirement income and health care needs, coupled with assumptions of rising medical care prices.
- A growing elderly population with growing voting power might lead to greater political support for services for the elderly such as health services, Social Security, and recreation, at the expense of services targeted toward children such as education, cash assistance, and Medicaid benefits for low-income families.
- The elderly tend to have lower demand for housing, which could place downward pressure on property values and taxes. In addition, an aging population might lobby successfully for more state and locally financed property tax credits and exemptions for the elderly.
- The economy's continuing shift from manufacturing toward services may lead to slower growth in plant and equipment, and in associated property and sales taxes.
- The graying population would tend to spend more of its income on medical goods and services, which generally are not taxed under state sales taxes.
- A more-general shift in consumption toward services also might lead to slowing sales tax growth, as most states do not tax many services. Wallace showed that there had been a significant erosion in state sales tax bases over the period from 1970 to 1992.

Wallace generally expected these trends to occur in all regions of the country, albeit with larger impacts in some regions than in others. For example, with the elderly population expected to increase most rapidly in the South and the West, she expected the impacts of an aging population to be most pronounced in these regions.

All of Wallace's key assumptions would lead to slowing revenue growth for state and local governments – some would lead to slowing income taxes, some to slowing sales taxes, and some to slowing property taxes. While she did not quantify the likely size of the change, the nature of the change was unambiguous.

We are now four years beyond Wallace's study, and while many of the underlying assumptions continue to seem reasonable and appear to be widely held – for example, the population most definitely is aging –other assumptions have been different enough from what she expected that it is fair to say her predictions have not come true yet. For example:

- Much to the surprise of many forecasting economists, real income growth has not slowed and in fact has accelerated, reflecting an unanticipated surge in productivity.
- While untaxed transfer-payments may indeed be growing more rapidly than wages, many other components of nonwage income that *are* taxed have been growing rap-

idly, and gains on stocks and other assets have been growing explosively. This, too, has surprised forecasters.

- ❖ While the shift toward consumption of largely untaxed services continues, as is discussed later taxable consumption has grown rapidly in the late 1990's, reflecting a rapid decline in savings perhaps spurred by a stock-market induced wealth effect.

As a result, state tax revenue has exceeded the wildest expectations of budget forecasters, and the awaited slowdown in tax revenue, at least for state governments, has not yet occurred.

None of this means that Wallace ultimately will be proved wrong, and in fairness her study was not focused on just the first four or five years after publication, but rather it analyzed longer-term trends stretching for the next 20 or 30 years. Clearly the population will continue to age over that period, although of course other as-yet unanticipated trends will evidence themselves as well.

The National Education Association Study

The second recent study, "The Outlook for State and Local Finances: The Dangers of Structural Deficits to the Future of American Education" was released in 1999 by the National Education Association. The study, prepared by the late Hal Hovey of State Policy Reports, examined the outlook for state and local finances combined, in each of the 50 states, over an eight-year projection period. It provided state-by-state projections of structural deficits or surpluses.

The study concluded that most states face structural deficits, albeit of a manageable size, because their revenues are likely to grow more slowly than expenditures under current policies. On average, Hovey expected state and local revenue to grow slightly more slowly than personal income, while spending under current policies was expected to grow slightly more quickly than personal income.

Hovey's key revenue assumptions were:

- ❖ State income taxes would grow more quickly than a state's economy, as measured by personal income, due to the progressive structure of income taxes. Elasticity estimates varied from state to state, but averaged about 1.22 for the nation as a whole. That is, the income tax was assumed to grow about 22 percent faster than personal income on average. (If personal income grew by 5 percent, then personal income tax revenue would be expected to grow by 6.1 percent.)
- ❖ The elasticity of the sales tax to personal income was assumed to be slightly below one – sales taxes would grow less quickly than a state's economy.
- ❖ The elasticity of property taxes to personal income is approximately one. (The study included local governments, which rely heavily on property taxes, as well as state governments.)

The national-average effective elasticity of the state-local tax system under these assumptions was about 0.96. With projected national-average growth in nominal personal income of about 4.0 percent, this meant that total revenue under current policies was expected to grow just slightly slower, at about 3.8 percent annually.

The key spending assumptions were:

- States would keep real elementary and secondary education spending per pupil constant. Although the number of pupils was expected to grow slightly more quickly than the overall population (1.0 percent per year, vs. 0.9 percent per year), this difference was not large enough to put significant pressure on state-local finances in the projections.
- Per-capita Medicaid spending was expected to grow three percent faster than the overall inflation rate, reflecting the aging of the population (making the Medicaid population more expensive to serve) and medical care price increases.
- The projections assume that real per-pupil higher education spending is held constant. With relatively rapid growth in pupils – about 1.9 percent nationally, on average – this spending component was projected to grow more quickly than personal income.
- Government workers were projected to receive pay increases comparable to workers in the private sector, consistent with previous experience. Their pay would therefore grow *faster* than inflation – about 0.9 percent faster than inflation annually.
- Real per-capita welfare expenditures would be constant. (Assuming that states keep real benefit levels roughly constant, this is tantamount to assuming that caseloads stop declining, and begin growing at the same rate as the general population.)

The net result was that nominal spending was projected to rise, on average, by 4.3 percent annually, slightly faster than the projected 4.0 percent annual growth in nominal personal income. Projected spending grows faster than income primarily because of the assumptions about growth in the real costs of Medicaid, growth in real employee pay, and growth in the number of higher education students.

With revenue projected to grow by 3.8 percent annually on average for the nation as a whole, and spending projected to grow by 4.3 percent, the state-local sector would have a structural gap that grows by about one-half percent of the budget per year; Hovey anticipated a gap for the nation as a whole of about 3.8 percent after eight years.

Although the study pertained to state and local governments in each state as a whole, if it had been limited to state governments it probably would have concluded that most state governments have structural imbalances – spending growing more quickly than revenue under current policies. State revenue would grow more quickly than state-local revenue under the study's assumptions because of states' relatively greater reliance on elastic personal income taxes, but state spending might also grow more quickly than state-local spending because Medicaid and higher education, both of which are fast-growing under the study's assumptions, are larger components of state spending than of state-local spending.

The 10 states with the largest and smallest projected gaps are shown in Table 3. The state-by-state forecasts from this approach generally are consistent with recent news on state budgets. For example, Alaska, Hawaii, Wyoming, Tennessee, and New Hampshire all have faced fiscal difficulties in the last year or two, although the Hovey report may have reached the right conclusions for the wrong reasons – Alaska and Wyoming's troubles were related to oil price drops, Hawaii's were related to the Asian financial crisis, and New Hampshire's were related to school finance litigation. In most cases these were cyclical phenomena rather than structural phenomena.

Table 3
NEA Projections of State-Local Structural Gaps/Surpluses

10 Largest Gaps	*% of Budget*	*10 Largest Surpluses*	*% of Budget*
Nevada	(18.3)	Iowa	2.7
Alaska	(16.4)	Nebraska	1.5
Hawaii	(15.1)	North Dakota	0.9
Idaho	(13.2)	Ohio	0.9
New Mexico	(12.0)	Kentucky	0.5
Wyoming	(10.6)	Michigan	0.4
Arizona	(10.5)	Connecticut	0.4
Tennessee	(9.1)	New York	0.3
Florida	(8.8)	Maine	0.1
New Hampshire	(8.2)	Minnesota	0.1

States without income taxes are italicized.

Note that the projected gaps generally are far larger than the projected surpluses; in this study, most states had projected gaps. Note also that six of the 10 states with the largest gaps do not have income taxes; Texas, the state with the 11th largest projected gap, also does not have an income tax.

The table also highlights the perils of forecasting government finances even for a short period ahead: Iowa, the state with the largest projected surplus, actually has faced fiscal difficulties recently, reflecting depressed farm prices, relatively slow employment growth, and an aging population.[7] Hovey might have responded that a small structural surplus was not a large enough cushion to offset these cyclical forces.

With knowledge of these two reports as background, we turn to an analysis of key issues and risks that states currently face.

Issues and Risks Affecting the State Fiscal Outlook

Key State Revenue Issues

State revenue structures are extremely sensitive to economic conditions. This section discusses key factors affecting the two largest revenue sources, as well as the benefits of balance in a state revenue structure.

The Income Tax is Dangerously Volatile

The income tax is tied with the sales tax for the largest state tax. On average states rely on income taxes for about 18 percent of their revenue, although this varies considerably, ranging from 30 percent in Massachusetts to nothing at all in the states without an income tax. The income tax is often considered attractive from a revenue-raising perspective because most state income taxes are "elastic" – as income rises from one year to the next, tax revenue rises at an even faster pace. This elasticity is the natural result of the progressive structure of income taxes: effective rates rise as

income rises. When taxpayers' incomes rise, whether due to wage inflation or productivity gains, they move into higher tax brackets with higher effective tax rates, so that tax liability rises more rapidly than income.[8]

For people worried about how to finance government services, this tax elasticity is a good thing over the long haul, as it leads to rapid revenue growth, and to increases in tax burden (measured simply) without requiring explicit tax increases. For exactly the same reason, it is unattractive to those who favor low taxes and limited government.

But even for those who appreciate rapid revenue growth, the income tax's elasticity can have a dark side. Progressive tax structures raise disproportionate amounts of revenue from upper-income taxpayers. Nationally, taxpayers with income of $500,000 or more accounted for about 0.3 percent of tax returns, but 23 percent of federal income tax liability. At the state level, these high-income taxpayers would constitute a less skewed portion of tax liability, because state income taxes are less progressive than the federal income tax, but we do not have the data needed to know how much less concentrated state tax liability is.[9] These taxpayers tend to have relatively large concentrations of income that is volatile, both because it is highly sensitive to changes in the economy and because taxpayers have considerable control over when to recognize the income for tax purposes.

For example, for taxpayers with adjusted gross income of $500,000 or more in 1997, wages accounted for only 35 percent of that income whereas wages accounted for 78 percent of adjusted gross income for taxpayers with income below $500,000. By contrast, capital gains accounted for 33 percent of the income of taxpayers with income of $500,000 or more, versus only four percent for taxpayers below $500,000. Partnership and S Corporation income accounted for 19 percent of income for the high-income group versus only two percent for taxpayers with income below $500,000.

The economically sensitive nature of nonwage income, especially capital gains, the fact that its timing is partially under taxpayer control, and the relatively higher marginal rates at which it is taxed, combine to make income taxes quite volatile in a cyclical sense. Economists Richard Dye and Therese McGuire recently estimated the real cyclical (short-run) elasticity of state income taxes. The median of their state elasticity estimates was 1.18 (i.e., their estimates imply that the typical state income tax grows about 18 percent faster than income,). The estimates ranged from a high of 1.68 in California to a low of 0.95 in Indiana, as shown in Table 4. The differences in elasticities primarily reflect differences in tax structures – California has a steeply progressive rate structure, whereas Indiana's tax is essentially flat. Elasticities also will vary across states depending on differences in income distribution.

A high elasticity implies a more volatile tax during business cycles – one that is more susceptible to rapid growth during an upswing, and potentially rapid declines during downturns.[10]

To the extent that state income taxes have become even more reliant on high-income taxpayers in recent years, this cyclical elasticity, or potential volatility, is likely to increase. Table 5 shows the astounding recent growth in the number of high-income taxpayers through 1997 (the latest year for which data are available):

In each of the three latest years, the number of returns with income above $500,000 has grown by more than 20 percent, and far faster than the overall number of returns. While it is natural to expect the number of high-income returns to grow more quickly than the number of lower-income returns due to the effects of "bracket creep" (inflation and productivity-driven income growth), the extent of the difference is impressive.

Table 4
Cyclical Elasticity of State Individual Income Taxes

	Cyclical Elasticity of the Income Tax
California	1.68
Connecticut	1.43
Nebraska	1.37
New Mexico	1.37
Rhode Island	1.34
Vermont	1.34
New Jersey	1.34
North Dakota	1.34
Louisiana	1.34
Arkansas	1.32
Montana	1.29
Arizona	1.28
Iowa	1.28
Mississippi	1.26
Idaho	1.24
Ohio	1.22
South Carolina	1.21
Kansas	1.19
Maine	1.18
New York	1.18
U.S. Median	1.18
Missouri	1.18
Massachusetts	1.17
Minnesota	1.15
West Virginia	1.14
Utah	1.13
North Carolina	1.12
Hawaii	1.12
Wisconsin	1.10
Delaware	1.09
Georgia	1.09
Virginia	1.08
Oklahoma	1.07
Colorado	1.06
Maryland	1.05
Alabama	1.03
Kentucky	1.02
Oregon	1.00
Pennsylvania	0.95
Illinois	0.95
Michigan	0.95
Indiana	0.95

Source: Dye and McGuire, 1998

A major force behind the extremely rapid growth in the number of very-high-income taxpayers has been the recent surges in capital gains income and other nonwage income, which tend to be concentrated among upper-income taxpayers. Table 6 shows that in 1991 through 1994, adjusted gross income – the starting point for calculation of taxable income in most states – actually grew more slowly than personal income, which is a broad measure of income in a state's economy. From 1995 through 1997, adjusted gross income grew much faster than personal income, reflecting extremely rapid growth in capital gains and other nonwage income.

States have seen this income growth reflected in their revenue collections. Revenue estimators in several states have remarked that tax liability in recent years has grown as much as twice as fast as personal income – an elasticity of 2.0! – and even more in some years. Income tax revenue has far outstripped states' expectations. Furthermore, this rapid growth appears to have continued beyond 1997: although data from tax returns are not yet available, state tax collections in April of 1999, for 1998 tax returns, suggest that 1998 was yet another banner year, and recent tax collections suggest that the 1999 tax year may have been strong as well.[11]

States do not know for sure what has caused this explosive growth in income tax revenue, but most revenue estimators appear to believe that strong stock markets have played a major role, although other factors are at work as well.[12] Rapid rises in stock prices make it more likely that taxpayers will be sitting on large potential capital gains. Taxpayers need not "realize" their gains by selling stocks thereby creating tax liability, but all else being equal, higher stock prices tend to lead to more taxable gains. In addition, reductions in federal effective tax

Table 5
The Number of High-Income Taxpayers Has Been Growing Rapidly

	% Growth in Total # of Tax Returns	*% Growth in # of Returns with AGI > $500K*
1994	1.2%	5.8%
1995	2.0%	21.1%
1996	1.8%	22.4%
1997	1.7%	25.1%

rates on capital gains have encouraged taxpayers to "unlock" these gains – that is, realize gains for tax purposes. A rising stock market also benefits the income tax in other ways – many corporations, especially high-tech corporations, have granted their employees stock options that, when exercised, can generate significant tax liabilities. This income may be treated as wages but it is clearly related to the stock market.

While states appreciate the fiscal benefits of a strong stock market, they recognize this good news creates uncertainties and fiscal risks. As California's Legislative Analyst Office recently put it:

> …the rise in stock market values has made the state's revenue stream much less predictable from year to year than in the past. This is because capital gains are inherently far more volatile than, for example, wages or taxable sales. Although capital gains account for only 20 percent of PIT receipts and about 10 percent of total General Fund revenues, their greater volatility can produce as large, if not larger, a revenue drop-off than other taxes typically experience during times of economic slowdown or recession. For example, capital gains historically have fallen by as much as 50 percent in one year, which would translate into a potential reduction of as much as 10 percent in PIT revenues and 5 percent in total revenues.[13]

Table 6
Growth in Personal Income, Adjusted Gross Income, and Major AGI Components

	1991	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*
Personal Income	3.7%	6.0%	4.1%	5.0%	5.3%	5.6%	6.2%
Adjusted Gross Income	1.7	4.8	2.6	4.9	7.2	8.3	9.6
Wages	2.9	4.9	3.1	4.7	5.8	5.5	7.0
Net capital gains	(10.3)	14.6	21.6	(1.4)	19.5	47.5	44.8
Other elements of AGI	(0.6)	2.7	(2.5)	7.5	10.8	11.2	9.5

Just how much risk is there for states, and which states are at greatest risk? State income taxes are far more volatile than a simple interpretation of the cyclical elasticity estimates we looked at earlier might suggest, and these estimates might lull states into a false sense of complacency. Depending on the different rates at which various kinds of income grow, in any given year state income tax revenue can swing far more wildly than point estimates of cyclical elasticity might suggest.

Table 7 illustrates how severe the slowdown in tax liability growth could be. The upper block of numbers shows income growth, tax liability growth, and elasticity under a baseline scenario in which all income grows at 7 percent, for two hypothetical tax systems – a progressive California-style system with marginal rates graduated from 2 percent to 9.3 percent, and a relatively flat Indiana-style system with a rate of 3.4 percent.[14]

The lower block of numbers shows the same things, but with an assumption that capital gains fall by 30 percent from the previous year – well short of the 50 percent-falloff risk identified by California. This block also shows the extent to which tax liability growth slows relative to the baseline scenario.

Table 7
Illustrative Analysis of Income Tax Elasticity

	California-Style Progressive Tax System	*Indiana-Style Flat Tax System*
Baseline Scenario		
Baseline adjusted gross income growth	6.6%	6.6%
Baseline tax liability growth	9.9%	7.0%
Baseline elasticity relative to AGI	1.51	1.07
30% Capital-Gains-Falloff Scenario		
AGI growth	4.1%	4.1%
Tax liability growth	1.4%	3.4%
Elasticity relative to AGI	0.35	0.84
Falloff in tax liability growth (percentage points)	**(8.5%)**	**(3.6%)**

The "California-style" hypothetical income tax in the baseline case, with an elasticity of 1.51, is not too different from the 1.68 California income tax elasticity estimated by Dye and McGuire. The flat Indiana-style tax has a much lower elasticity of 1.07, although still not as low as the 0.95 estimated for the actual Indiana income tax by Dye and McGuire.[15]

Things are dramatically different in the gains-falloff scenario, where we assume that capital gains will fall by 30 percent year over year. In this case, adjusted gross income growth slows to 4.1 percent, and tax liability slows even more – to 1.4 percent in the California-style income tax and to 3.4 percent in the Indiana-style tax. The California income tax elasticity for this change in income is 0.35 and the Indiana elasticity is 0.84, in each case yielding far less revenue growth than we would expect if elasticities were static. Elasticities fall because high-bracket taxpayers whose capital gains evaporate have less income subject to tax at the highest rate, and therefore face declines in effective tax rates.

For the 2.5 percentage point slowdown in income growth in this example, California and Indiana tax liability growth slows by 8.5 and 3.6 percentage points, respectively. If elasticities had remained constant, tax liability growth would have slowed by only 3.7 and 2.6 percentage points.

Several points about this table are important. First, while revenue analysts usually think of income tax elasticities as being greater than one, in fact they can be significantly less than one if there is a large decline in upper-bracket incomes. The result is a very dramatic slowdown in tax liability – far more than intuition might suggest. Second, even states with relatively flat income taxes, and elasticities close to one in normal times, are not protected from a sharp slowdown in tax liability growth. Third, this understates the risk to states from a falloff in the stock market – the market affects the income tax directly not just through the capital gains component of income, but also through wages related to stock options, and it also affects the income tax indirectly in a variety of ways. Finally, by no means is this a worst-case scenario. As the quote from California illustrates, capital gains certainly can fall by more than 30 percent, and this could lead to outright declines in tax liability rather than just a slowdown. In addition, depending on overall economic conditions, when capital gains do fall, business income and other economically sensitive income sources could suffer as well, compounding the shortfall.[16]

Which states are most at risk if capital gains income declines? Table 8 suggests which states might be most harmed. The first column of numbers shows capital gains in each state as a percentage of adjusted gross income, adjusted for state-specific exclusions of capital gains, indexed to the national average, yielding a measure of the importance of capital gains to a state's income tax.[17, 18, 19] The second column shows the income tax as a percentage of general revenue, indexed to the national average, yielding a measure of the income tax's importance to a state's finances.[20] The third column combines the first two, giving a measure of the importance of capital gains to a state's finances relative to the U.S. average.[21]

No simple index can take into account all of the important ways in which the stock market or capital gains affects the income tax. This index simply takes into account the direct role of capital gains income. It does not include indirect effects of the stock market such as its role in driving up taxable wage income for people compensated partly in stock options, and it does not include the impact of bonuses paid to those who benefit directly from financial market activity, such as investment bankers, although it may serve as an imperfect proxy for the former.[22] Finally, it does not take into account the indirect risk that would result if a stock market decline affected the earnings of investment banks and other financial market participants and if it affected the economy more broadly. With that said, the index does suggest which states are at greatest direct risk from a falloff in capital gains.

The states are sorted in descending order of the last column, so that the states most reliant on capital gains are at the top. Colorado is at greatest risk, with an index of 174 – by this measure, capital gains are about 74 percent more important to its finances than they are to the average state. This results from a large amount of capital gains relative to AGI (20 percent above the U.S. average) plus relatively higher reliance on the income tax (45 percent above the U.S. average). Oregon, New York, Connecticut, and California round out the top five states at greatest risk.[23] The states without an income tax obviously are not at risk by this measure.[24]

When would states be hurt if the stock market fell? Even this is an uncertainty. Individuals compute their taxes on a calendar year basis, and generally pay taxes related to capital gains on an estimated basis during the year, settling up when they file their returns the next April. State fiscal

Table 8
Relative Importance of Capital Gains

	Adjusted Index of Capital Gains As % of AGI	*Index of Income Tax as % of General Revenue*	*Index of Capital Gains Importance*
Colorado	120.2	145.0	174.2
Oregon	105.0	163.3	171.5
New York	123.3	131.1	161.7
Connecticut	131.8	121.5	160.1
California	110.7	126.1	139.6
Minnesota	83.9	156.4	131.2
Massachusetts	76.5	169.8	130.0
Virginia	86.6	147.2	127.4
Idaho	102.4	117.8	120.6
Maryland	82.5	143.4	118.3
Illinois	105.8	110.4	116.8
North Carolina	80.1	141.7	113.4
Georgia	83.1	135.4	112.6
Utah	94.7	107.6	101.9
Nebraska	90.5	111.3	100.8
United States	100.0	100.0	100.0
Maine	92.9	107.1	99.5
Kansas	83.8	117.3	98.3
Vermont	110.7	88.7	98.1
Missouri	77.5	124.2	96.3
Delaware	88.4	107.6	95.1
Rhode Island	90.8	102.9	93.5
Indiana	66.3	132.1	87.6
New Jersey	86.5	100.8	87.2
Iowa	74.1	115.8	85.8
Montana	106.4	79.5	84.6
Arizona	103.0	81.7	84.2
Ohio	70.6	112.3	79.3
Pennsylvania	86.0	89.2	76.7
Oklahoma	69.2	109.8	76.0
Michigan	75.0	98.6	73.9
Kentucky	68.2	99.9	68.1
Hawaii	68.0	99.5	67.7
Alabama	72.7	82.7	60.2
Wisconsin	39.4	151.1	59.6
Louisiana	85.0	64.9	55.2
New Mexico	85.9	60.5	51.9
South Carolina	49.0	101.3	49.7
Arkansas	47.2	96.3	45.4
Mississippi	70.8	56.4	39.9
West Virginia	49.9	73.3	36.6
North Dakota	68.7	37.9	26.0
New Hamsphire	127.2	10.6	13.5
Tennessee	90.5	5.4	4.9
Alaska	65.9	-	-
Florida	158.6	-	-
Nevada	145.8	-	-
South Dakota	118.9	-	-
Texas	101.4	-	-
Washington	113.6	-	-
Wyoming	169.2	-	-

years generally end in June, so if capital gains income fell in calendar year 2000, tax payments would be depressed in the fiscal year beginning in July 2000 and ending in June 2001. Some analysts believe, however, that if a market decline is relatively small, then capital gains might actually increase in the year of the decline due to efforts by people to lock in gains before they vanish. Meanwhile, if capital gains were strong in 1999 as many analysts expect, due to the strong stock market in that year, then states will benefit in the current fiscal year, which will end in June 2000.

The point of the analysis in this section is that although the income tax has been an extraordinary revenue raiser for states in the 1990's, it is extremely volatile and states cannot expect the growth to continue at the pace seen in recent years. Furthermore, income tax revenue can reverse more sharply than intuition might suggest, even in states with relatively flat taxes. States that are highly reliant on the income tax or whose taxpayers have large amounts of capital gains are at special risk of unpleasant revenue surprises.

The Sales Tax Is Eroding

The sales tax shares first place with the income tax in state revenue systems, and also plays an important role in local revenue systems. Unlike the income tax, the sales tax has no federal counterpart. States consider it their province, and have long taken offense at federal attempts to limit or usurp state sales taxing power. Thus, state officials often oppose federal proposals to establish a national retail sales tax or consumption-based tax, or efforts to limit states' ability to tax transactions related to the Internet.

One strength of the sales tax as a means of financing government is that it tends to be less volatile than the income tax. Table 9 presents estimates of sales tax cyclical elasticity, also prepared by Professors Dye and McGuire, and in general the sales tax has less short-run elasticity than the income tax – the highest elasticity, lowest elasticity, and median elasticity all are lower than their income tax counterparts.

As with the income tax, however, a point estimate of elasticity can give a misleadingly benign impression of volatility, because elasticity varies over the business cycle. People postpone nonessential purchases during recessions so that the sales tax tends to fall off more sharply than income, and during recoveries people unleash pent-up demand, thereby increasing consumption and sales tax revenue more rapidly than income. This point is illustrated in Figure 1 of (a) the elasticity between nominal goods consumption and nominal personal income, with (b) year-over-year growth in real gross domestic product, both of which are smoothed to make the relationship more apparent.

As the figure shows, (1) goods-consumption elasticity, and by implication sales tax elasticity, is not at all constant, and has ranged from 0.4 to 1.2 over the last four decades, (2) elasticity generally varies with the business cycle, and (3) consistent with much thinking about the sales tax, the elasticity of goods-consumption to income usually is below one.

The major point of the discussion to this point is that the sales tax, although less volatile than the income tax, is more volatile than simple elasticity estimates might suggest, and entails considerable risk to state finances.

Although the sales tax has not been growing as rapidly as the income tax during the 1990's, and so has become relatively less important, it has still grown in relation to the economy and its growth

Table 9
Cyclical Elasticity of State Sales Taxes

	General Sales Tax
Pennsylvania	1.37
Maryland	1.37
Ohio	1.34
California	1.30
Nevada	1.30
Rhode Island	1.29
Vermont	1.27
New Jersey	1.26
Wisconsin	1.25
Maine	1.23
Massachusetts	1.23
Colorado	1.23
North Dakota	1.20
New York	1.15
Florida	1.15
Washington	1.13
Nebraska	1.10
Tennessee	1.10
Louisiana	1.09
Virginia	1.09
Kansas	1.08
Connecticut	1.07
Idaho	1.07
U.S. Median	1.07
Texas	1.07
Alabama	1.07
Arizona	1.05
South Carolina	1.05
Mississippi	1.05
North Carolina	1.05
Kentucky	1.05
Missouri	1.03
Oklahoma	1.03
Illinois	1.02
Minnesota	1.01
Michigan	1.01
West Virginia	0.99
Arkansas	0.98
New Mexico	0.98
Utah	0.98
South Dakota	0.98
Iowa	0.96
Indiana	0.96
Wyoming	0.93
Hawaii	0.88
Georgia	0.85
Alaska	n/a
Delaware	n/a
Montana	n/a
New Hampshire	n/a
Oregon	n/a

Source: Dye and McGuire, 1998

appears quite strong. This strength is deceiving. In fact, according to economists Donald Bruce and William Fox at the University of Tennessee's Center for Business and Economic Research, the sales tax base has been eroding for decades: "For the average sales taxing state, the tax base equaled 51.4 percent of the state's personal income in 1979, but had fallen to 42.8 percent in 1998".[25] When viewed over the long term, sales subject to tax have been declining relative to the overall economy.

According to Bruce and Fox, there are three main reasons for this long-term decline in the sales tax base. Probably the most important reason is that people have been shifting their consumption away from goods and toward services – and within services, to medical services and other services that are especially difficult to tax politically, legally, and administratively. Figure 2 of services as a share of total consumption shows just how dramatic and enduring the shift toward consumption of services has been:

A second reason for sales tax base erosion is the growth of "remote sales" – the general term for mail order sales, sales conducted over the Internet, and other sales where buyer and seller conduct the transaction at a distance. Although most such sales are technically subject to tax, and the buyer is legally responsible to pay "use" tax, the administrative and political hurdles to collecting the tax are severe, and states collect little of this tax except where they have the ability to require or convince the seller, such as an L.L. Bean, to collect and remit the tax on behalf of the buyer.

According to Bruce and Fox, the third reason the sales tax base has been eroding is that legislators in essentially every state have narrowed the tax base through new exemptions.

Figure 1
Good-Income Elasticity and Real GDP Growth
Two-Year Moving Averages

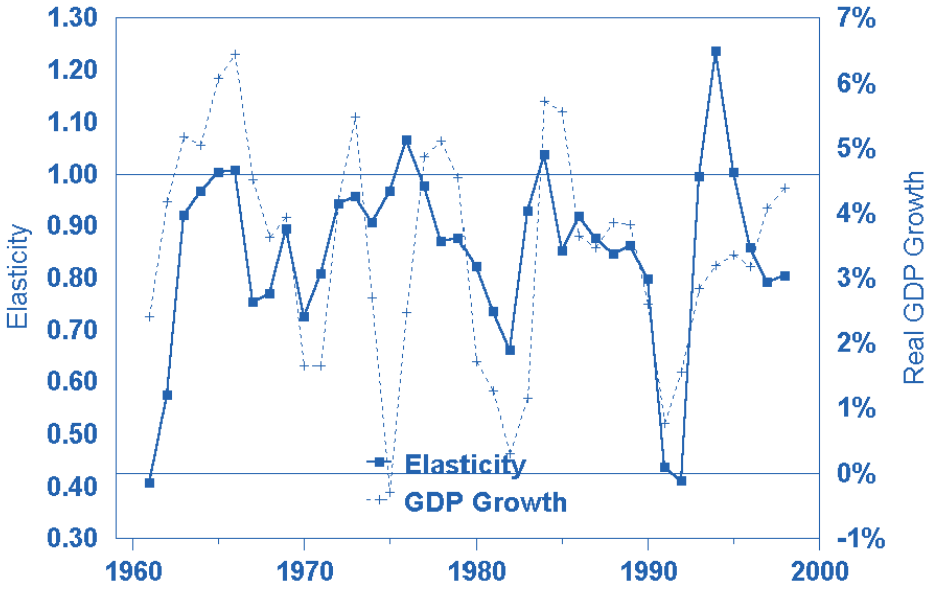
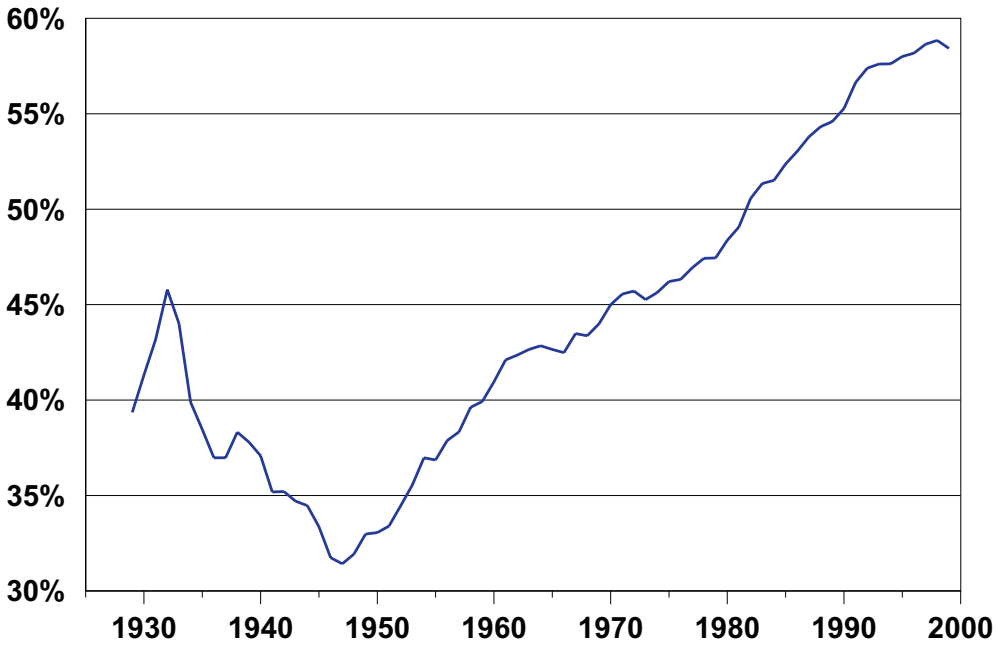


Figure 2
Lightly Taxed Services Are Rising as % of Total Comsumption

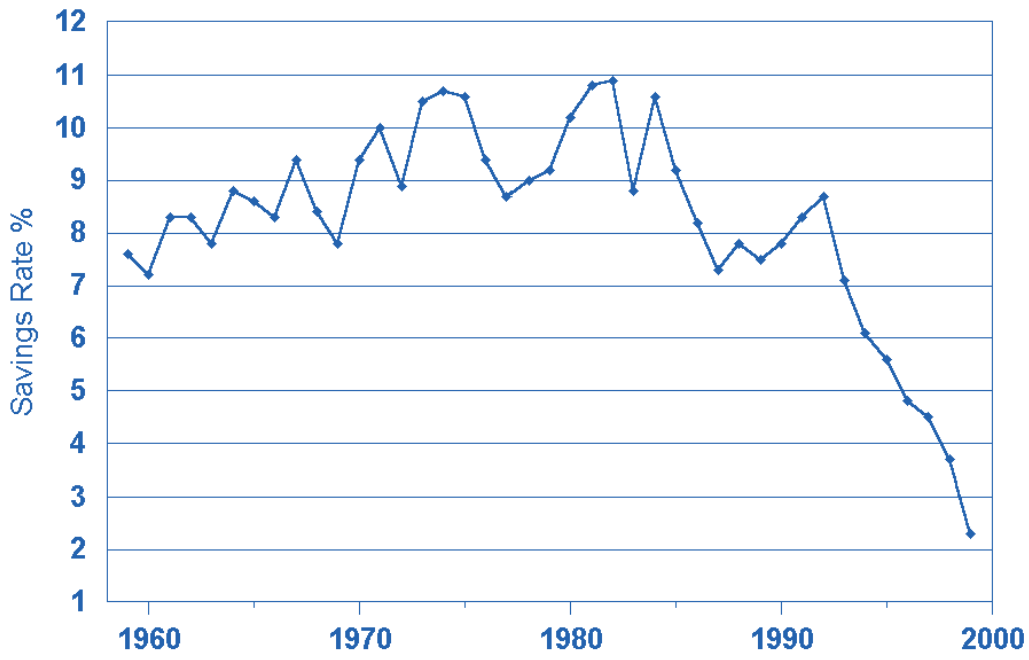


How can the tax base be shrinking if sales tax collections have been rising strongly in the 1990's? The erosion has been masked by two factors. First, policymakers raised sales tax rates, especially in the early 1990's, no doubt partly in reaction to base erosion and of course in response to the recession. Second, people have been saving far less of their incomes in the 1990's than in earlier decades, and spending far more. Some of this decline probably reflects a "wealth effect" from the strong stock market – when people's net worth increases they don't feel a need to save as much. Figure 3 shows the dramatic 1990's decline in the savings rate, the mirror image of which is higher consumption and more sales tax revenue.

Should states expect further declines in the savings rate to prop up sales tax revenue, or is the rapid growth of the 1990's likely to moderate? While it is possible for the savings rate to decline further, and even become negative, it does not seem prudent to forecast this given that the savings rate is so far below its level of preceding decades and that stock market values appear by some measures to have a lot of downside risk. Even if the savings rate does not rise, and merely stays at its 40-year low of 2.3 percent, then the boost to consumption and sales tax growth from a declining savings rate will end.

Donald Bruce and William Fox project that the long-term sales tax base erosion will continue, apparently due to continued shifts toward consumption of goods and services that are not taxed or for which tax is difficult to collect. They project that the loss between their base year of 1996 and 2003 will be about 1.75 percent of total tax revenue for the typical state, ranging from zero in those states without sales taxes to 3.3 percent in Florida, a state that is highly reliant on the sales tax.[26]

Figure 3
People Have Been Saving Less and Spending More, Boosting the Sales Tax in the 1990's



These projections simply reflect a continuation of longer-term base erosion, *and are before considering revenues lost to states due to potential inability to collect tax on transactions conducted over the Internet*. Bruce and Fox then prepared estimates of the revenue states stand to lose if e-commerce continues to grow rapidly. The estimates, shown in Table 10, assume that sales made over the Internet are subject to normal sales tax rules, but that a substantial portion of the tax on these sales may go uncollected nonetheless because purchasers, knowingly or otherwise, evade sales tax and because it is difficult for states to enforce compliance with tax on these items. Revenue losses would be greater still if the federal government prevented states from taxing purchases made over the Internet. Revenue losses would be lower if states and industry, or if states and the federal government, develop rules and procedures to facilitate compliance with use tax laws.

Bruce and Fox developed state-by-state estimates of potential revenue loss by 2003 using detailed forecasts of e-commerce transactions developed by Forrester Research, a market research firm, and employing assumptions about the extent to which these transactions would be potentially subject to tax, and the extent to which purchasers would evade taxes. The Forrester Research forecasts upon which the revenue-loss estimates are based assume that commerce over the Internet will grow by 84 percent per year between 1999 and 2003. The revenue-loss estimates are presented below, modified to show potential revenue loss as a percentage of state general revenue.[27]

View the estimates with caution: although they appear to have been prepared carefully using reasonable assumptions, no one can predict with much confidence how rapidly e-commerce will grow over the next several years, or the extent to which e-commerce will be used for transactions on which sales tax would be paid in the absence of e-commerce. Furthermore, estimates for 2003, even if accurate, reflect a very early period for the Internet. If electronic commerce continues to grow as a share of total commerce for many years after 2003, as seems plausible, then the revenue loss to states over the longer run could be far larger than these estimates suggest.

These estimates suggest that the revenue loss from inability to tax e-commerce transactions would not be huge in the next several years, although it clearly would be noticeable in several states – a revenue loss as large as 1.7 percent of revenue in Nevada certainly would be enough for budget officials to worry about. States regularly have policy disputes over amounts as little as one-half a percent of the budget, or less.

The estimates suggest relatively little variation across states in propensity to use the Internet for e-commerce (they assume that people in states with high sales tax rates are slightly more likely to use e-commerce to evade taxes than people in states with low tax rates). As a result, most of the variation in total revenue loss depends on the extent to which states rely on the sales tax – states that are heavily dependent on the sales tax have greater fiscal risk from e-commerce than states that are not. Hence Nevada, Florida, Texas, Tennessee and other high-sales-tax states – usually with low or no income tax – appear at greatest risk of revenue loss due to e-commerce.

The point of this analysis is that the sales tax, which is a mainstay of state finances, is under attack. The attack has been partly masked by state rate increases and by an extraordinary decline in the savings rate – a decline that could stop, and could even reverse. Over the longer term the attack will continue and intensify. As living standards continue to rise and as the population ages, people are likely to continue shifting their consumption toward services. Growth of commerce over the Internet – commerce that is difficult to tax — probably will accelerate. The sales tax is at risk, and those states that are most reliant on the sales tax – especially those without income taxes – have the most at risk.

Table 10
FY 2003 Estimates of Potential State Government Sales Tax Loss Due to E-Commerce

	Estimated Loss as % of Sales Tax	*Sales Tax as % of General Revenue*	*Estimated Loss as % of General Revenue*
Nevada	4.30	38.7%	1.7%
Florida	4.34	35.2	1.5
Texas	5.17	24.9	1.3
Tennessee	4.34	28.7	1.2
Washington	3.14	36.1	1.1
Mississippi	4.42	24.3	1.1
Oklahoma	7.30	14.6	1.1
Hawaii	3.99	26.4	1.1
Utah	4.74	21.4	1.0
Minnesota	5.36	18.1	1.0
South Dakota	4.45	21.4	1.0
Michigan	4.44	21.1	0.9
Illinois	5.58	16.5	0.9
New Mexico	4.77	19.3	0.9
Georgia	4.61	19.9	0.9
Kansas	4.39	20.3	0.9
Missouri	4.63	18.8	0.9
California	4.51	19.2	0.9
Indiana	4.52	19.0	0.9
Arizona	3.44	24.8	0.9
Arkansas	4.31	19.6	0.8
Connecticut	4.15	20.0	0.8
Louisiana	6.08	13.5	0.8
United States (Mean or Median)	4.45	18.1	0.8
Idaho	4.41	18.3	0.8
Iowa	4.49	17.9	0.8
South Carolina	4.26	18.9	0.8
Nebraska	4.27	18.3	0.8
Maryland	5.49	14.2	0.8
Kentucky	5.06	15.1	0.8
Pennsylvania	4.41	17.2	0.8
Wisconsin	4.46	16.9	0.8
Ohio	4.40	17.0	0.7
West Virginia	5.28	13.8	0.7
Maine	4.25	16.8	0.7
New Jersey	4.22	16.4	0.7
North Dakota	5.23	12.8	0.7
Virginia	5.64	11.7	0.7
Colorado	4.59	14.2	0.7
North Carolina	4.53	14.1	0.6
Rhode Island	4.38	14.0	0.6
Vermont	6.79	9.0	0.6
Alabama	4.09	13.1	0.5
Massachusetts	4.40	12.1	0.5
Wyoming	4.64	10.3	0.5
New York	4.37	9.8	0.4
Alaska			
Delaware			
Montana			
New Hampshire			
Oregon			

Source: Based upon estimates in Donald Bruce and William Fox, "E-Commerce in the Face of a Declining Sales Tax"

Potential Economic Issues and Risks

In addition to the special risks discussed above for the income and sales taxes, entire state revenue structures face risks related to the economy. Despite the economy's recent persistent ability to outperform forecasters' expectations, most economic forecasters continue to predict that the economy will slow from its torrid pace. Economists generally believe that productivity growth, employment, and gross product (the broadest measure of the economy) will slow in the years ahead. The following table, based on estimates and forecasts provided in February 2000 by Regional Financial Associates, a major economic forecasting firm, compares growth in gross state product over the 1995 to 2000 period with projected growth over the 2000 to 2005 period. RFA expects that in 45 of 50 states, economic growth in the next five years will be slower than growth in the previous five years. As a general rule, states that grew fastest between 1995 and 2000 – frequently Southern and Western states — are expected to slow the most, although they would remain fast-growing relative to the rest of the nation.

The idea of a slowdown is plausible and widely believed, and states certainly would be prudent to anticipate this in their planning. It reflects a return toward historically more-normal productivity growth, and slowing labor force growth. Slowing economic growth almost certainly will mean slowing revenue growth, and could lead to higher spending in some areas well. The projections suggest that Oregon and New Hampshire will face the greatest challenges in managing slowing growth, followed by Iowa, Texas, and Idaho to round out the top five. Of the six states expected to accelerate, only Alaska and Hawaii are expected to accelerate significantly (above 2 percent). Both states were in the doldrums in the 1995 to 2000 period.

Despite the plausibility of a slowing-growth scenario, states may view it with some skepticism. After all, most economic forecasters have been forecasting a national economic slowdown for several years now, only to find that each year is stronger than originally forecast.

In addition to the risk of economic slowing leading to slower revenue growth, states need to be wary of general wild-card economic risks. Most of the states that have faced fiscal difficulty in recent years have faced it not because of a general economic malaise, but because their economies were especially susceptible to weakness in one or more sectors. For example, Iowa recently ran into difficulty due to depressed farm prices, and Louisiana and Wyoming ran into difficulty because of low prices for oil and minerals. Each of these sector-specific problems spilled over into the state economy at large because the state economy was highly dependent on the sector. Texas had similar problems during the mid-1980's oil-price collapse, New York and New Jersey suffered during the financial sector meltdown of the early 1990's, and Massachusetts was hurt by the construction and minicomputer collapses of the early 1990's.

How do we know when a state economy is highly dependent on a single sector? One way is to see how much that sector contributes to the state's overall economic production, and compare that to the relative importance of the industry to the nation as a whole.

By this measure, Tables 12-14 shows the states that appear to be highly dependent on a single sector of the economy, based on gross state product data for 1997, the most recent year available. The lists show up to 10 states in each of several industries, where the industry accounts for more than 5 percent of total production in the state.

These lists of state economies highly dependent on a single industry are not exhaustive. We have included these industries because they are highly cyclical and because their cycles often do not run

Table 11
State Economies are Expected to Slow in the Next Five Years
Average Annual Growth in Real Gross State Product

	1995 to 2000	*2000 to 2005*	*Acceleration or (Slowing)*
Oregon	8.4%	2.8%	(5.6%)
New Hampshire	6.7	2.9	(3.8)
Iowa	4.8	2.2	(2.6)
Texas	5.6	3.2	(2.4)
Idaho	5.4	3.0	(2.4)
Arizona	6.4	4.1	(2.3)
Minnesota	4.8	2.6	(2.2)
Georgia	5.7	3.6	(2.1)
Utah	5.7	3.5	(2.1)
Colorado	5.7	3.7	(2.0)
California	5.2	3.1	(2.0)
Nevada	6.1	4.3	(1.8)
Massachusetts	4.2	2.5	(1.7)
Washington	4.9	3.2	(1.7)
New York	3.6	2.3	(1.3)
United States	4.1	2.9	(1.3)
Kansas	3.6	2.3	(1.2)
Illinois	3.6	2.4	(1.2)
Virginia	4.3	3.1	(1.2)
Arkansas	3.2	2.0	(1.2)
Indiana	3.7	2.5	(1.2)
Nebraska	3.4	2.3	(1.1)
Rhode Island	3.1	2.0	(1.1)
Ohio	3.3	2.2	(1.1)
Connecticut	3.5	2.4	(1.1)
Wisconsin	3.4	2.4	(1.0)
Kentucky	3.5	2.4	(1.0)
Vermont	3.3	2.4	(1.0)
North Dakota	2.8	1.9	(0.9)
Montana	2.6	1.8	(0.8)
North Carolina	3.8	3.0	(0.8)
Missouri	3.0	2.2	(0.8)
South Carolina	3.6	2.9	(0.8)
Florida	3.9	3.2	(0.8)
Pennsylvania	2.8	2.1	(0.7)
Wyoming	2.5	1.8	(0.7)
Oklahoma	3.1	2.4	(0.7)
South Dakota	2.8	2.1	(0.7)
Maine	2.6	2.0	(0.6)
New Jersey	3.4	2.8	(0.6)
Michigan	3.1	2.5	(0.6)
Maryland	3.4	2.9	(0.5)
Delaware	3.6	3.1	(0.4)
Mississippi	2.5	2.1	(0.4)
Alabama	2.4	2.3	(0.1)
Tennessee	2.9	3.0	0.1
New Mexico	2.5	2.9	0.3
Louisiana	1.3	2.0	0.8
West Virginia	1.0	1.8	0.8
Alaska	0.4	2.6	2.2
Hawaii	-0.5	2.2	2.7

Source: Regional Financial Associates, February 2000

Table 12
State With Disproportionate Reliance on Farming

	Value of Production in $ Millions	*Share of Production in the State*
South Dakota	1,585	8.8%
Nebraska	3,150	7.1
Iowa	5,132	6.9
North Dakota	984	6.9
Idaho	1,397	5.1
Montana	878	5.1
United States	90,269	1.2

Table 13
State With Disproportionate Reliance on Mining

	Value of Production in $ Millions	*Share of Production in the State*
Wyoming	5,305	32.2%
Alaska	4.386	20.1
Lousiana	16,617	15.1
West Virginia	4,137	11.7
New Mexico	3,038	7.0
Texas	36,767	6.8
Montana	952	5.5
United States	109,867	1.5

Source: U.S. Department of Commerce, Gross State Product Accounts

Table 14
State With Disproportionate Reliance on Finance, Insurance, and Real Estate

	Value of Production in $ Millions	*Share of Production in the State*
Delaware	10,187	37.2%
New York	177,948	30.7
Connecticut	31,517	26.6
Rhode Island	5,721	23.2
Massachusetts	44,950	22.7
New Jersey	57,926	22.2
Hawaii	7,483	22.2
California	199,334	21.5
Maryland	28,423	21.0
Florida	69,591	20.6
United States	1,285.950	17.7

Source: U.S. Department of Commerce, Gross State Product Accounts

with cycles in the economy at large, so that states might face significant risks even in times that are good for the nation as a whole. For example, it is possible to have a major decline in the farm economy while the overall economy remains strong.

Some industries not included in the list above, such as manufacturing, tend to be hit especially hard in a general economic downturn, and states highly dependent on these industries could suffer most in a manufacturing recession. For example, Michigan, Kentucky, and Indiana are much more dependent on automobile manufacturing than other states (more than 5 percent of each state's economic output, versus only 1 percent for the nation as a whole), and New Mexico and Oregon are extremely dependent on electronic equipment manufacturing (more than 22 percent of each state's output compared with 3.6 percent for the nation as a whole). Some states face economic risks that are not focused on a single set of industries. For example, as a result of the Asian financial crisis in 1998, exports to Asian countries fell significantly; this had a disproportionate impact on western states, which are relatively more dependent on Asian export markets than the rest of the United States.[28]

The point of this analysis is that single industries sometimes suffer sharp setbacks, separate from overall trends in the economy, and states highly dependent on those economies face relatively greater risk and can suffer fiscal difficulties even in otherwise good times. No one can predict where the next isolated industry convulsion will occur, but the industries shown above have had a history of boom and bust. Busts usually bring with them revenue shortfalls and fiscal problems.

A Revenue System Needs Balance

One important lesson of the earlier tax revenue discussion is that each of the two major taxes has strengths and weaknesses as a means of financing government.

The income tax can grow very rapidly in good times, but it is extremely volatile and at risk of sudden and unpleasant reversals. The risk appears especially great now given the enormous run-up in financial markets and the extraordinary growth in the number of very-high-income taxpayers.

While the sales tax can be volatile, especially during recessions, its main problem is that it is hard to administer and enforce when imposed upon services or upon goods ordered from out-of-state. Because services and remote sales are areas of rapid growth, the sales tax base has been subject to long-term erosion. Unfortunately for states, these trends are likely to continue, and the trend toward commerce over the Internet is likely to accelerate, meaning that erosion will continue and accelerate. While states can strive and hope for an acceptable resolution of e-commerce taxation, it is worth remembering that high reliance on the sales tax intensifies the risk.

States that rely very heavily on taxes other than sales and income taxes, especially taxes that are imposed on narrow segments of the economy, run greater risk of fiscal booms and busts. The relatively few budget problems we saw in the mid and late 1990's usually can be traced in large part to heavy reliance on taxes other than income and sales taxes. For example, Alaska and Wyoming had fiscal problems related to weakness in oil and mineral industries, and New Hampshire had difficulty financing court-mandated education funding due to its lack of an income or sales tax.

From the perspective of fiscal stability, a diversified tax base is a good tax base.

Expenditure Issues

K12 Education Spending Will Be Driven Primarily By Policy Changes

Between the 1990 and 1997 state fiscal years, state governments increased real per-capita spending on elementary and secondary education by 14 percent. Most of this growth has come in the last several years; at the start of the decade states were struggling with recession-induced revenue shortfalls and wildly escalating Medicaid costs, and were cutting back on education spending. Although we do not have complete data after 1997, it is clear that education remains a major priority in state budgets and that it has increased faster than other areas of state spending in 1998, 1999, and again in 2000.

Figure 4 shows trends in real state-local per-pupil spending along with actual enrollment and projections by the National Center on Education Statistics for the 1998 school year and beyond.

As the graph shows, enrollment declined from 1972 through 1985 as the trailing edge of the baby boomers exited the school system. Enrollment then grew sharply again from the mid-1980's through the present as the children of baby boomers went to school. NCES projects that the most rapidly growing period of this baby boomlet is now past, and that enrollment growth has already begun to slow. NCES expects enrollment to grow at rates of less than one percent annually for the remainder of this decade, and to decline after the 2007 school year. Thus for the nation as a whole, it does not appear that enrollment will place significant pressure on school finances, or on the portion of school spending financed by state governments. Nonetheless, enrollment will grow quickly in some states and especially in the South and West, and especially in high-immigration urban areas.

The outlook is less clear for per-pupil spending. Real per-pupil spending has been increasing sharply for decades now, although the graph shows it did dip briefly in the 1980-82 recession and again in the 1990-91 recession, and that it has increased only slightly since then. The rapid growth in per-pupil spending, combined with lackluster student performance on standardized tests, led to questions about the value of the spending and to calls for accountability.

Recent years have seen a flurry of new state policies intended to lead to improved student performance. States have embarked on a new round of standards-setting with many states debating and adopting more stringent testing programs and graduation requirements. In addition, many states are reducing class sizes, and raising teacher certification standards. In some states there is also a backlash against social promotion.

While no data appear to be available on the costs of these policies, inevitably they will be expensive. If scaling back social promotion and setting higher standards means that more students are held back or must attend summer school, then schools will need more teachers. With the stakes for students so high, schools are likely to spend more to provide tutoring and special preparation for exams. If states reduce class sizes, they will need more teachers. If states make entry into teaching more difficult, that is likely to place pressure on schools to raise teacher salaries.

Will states share in these higher costs, or will they scale back their contribution to education financing? As Figure 5 shows, except for a brief period in the late 1980's and early 1990's when states reduced their contribution to education financing, the longer-term trend has been for states to pay for an increasing share of education costs.

The recent trend has been driven by several objectives: Many state school finance systems have been under legal attack – in fact, at the end of 1999, litigation was pending in 43 states. Litigants

frequently argue that the state financing system violates provisions in the state constitution requiring it to ensure adequacy or equality in school funding. Many states have failed their constitutional tests. Both in response to court orders and to pre-empt potential court action, states have been increasing their share of funding, increasing the level of funding and often making it more equal across school districts. A second factor leading states to increase their share of school funding has been the pressure to cut local property taxes. For example, Michigan increased substantially the state share of school funding after eliminating the local school property tax, and Oregon increased its share of school funding after voters passed an initiative imposing severe limits on the ability of local governments to raise property taxes. Both litigation-related efforts to raise the state contribution to school funding and property-tax-reduction efforts appear likely to continue for the foreseeable future, so states will bear a considerable and perhaps increasing share of the new education costs related to higher standards.

Medicaid Appears Poised for Moderate Acceleration

Medicaid is the second-largest component of state spending. Total spending rose extremely rapidly in the early 1990's, contributing to recession-related fiscal crises, but growth since then has moderated considerably. Table 15 summarizes recent growth in total spending (federal and state combined), excluding certain payments known as disproportionate share payments:[29]

Figure 4
Real Per-Pupil Spending Shown With
Actual and Projected Enrollment

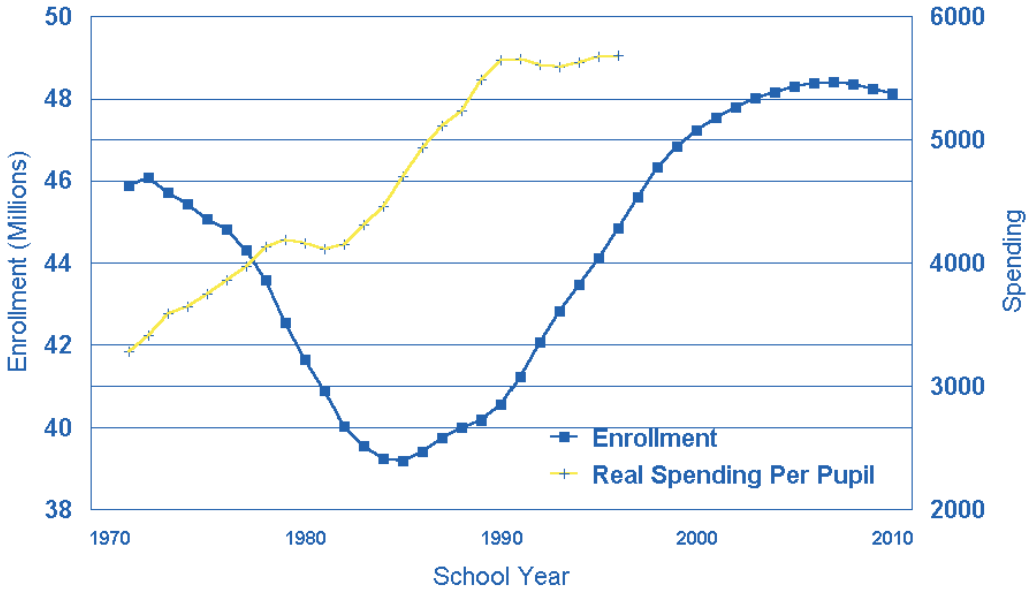


Table 15
Growth in Nominal Medicaid Spending in the 1990's

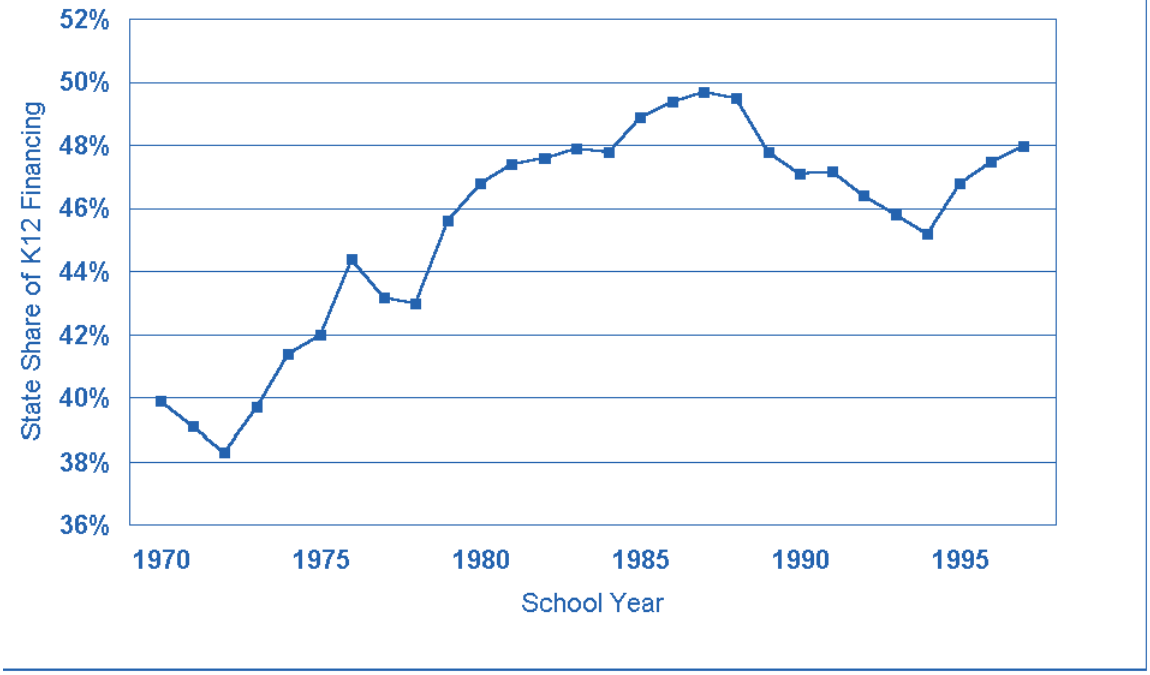
Federal Fiscal Year	*Average Annual Growth*
1990-92	18.4%
1992-95	10.9
1996	5.3
1997	4.0
1998	6.0
1999	6.5

Sources: 1990-97 calculated from Bruen and Holahan, excluding DSH; 1998 and 1999 are outlay estimates from Congressional Budget Office, p. 93, and are not precisely comparable with 1990-97.

The rapid growth in the early 1990's was driven by rapid enrollment increases, health care price inflation that exceeded general price inflation, and state efforts to shift services into the Medicaid program. In the 1992-95 period, enrollment growth slowed and health care price inflation moderated.

The further slowdown in 1996 and 1997 reflects outright enrollment declines in both years, low health care price inflation, growing use of managed care, and possibly the greater use of home and

Figure 5
State Are Increasing Their Contributions to Education Financing



community-based long-term care. Enrollment declines were concentrated among low-income adults and children. According to an econometric analysis by The Urban Institute, the declines were caused by changes in states' welfare policies and an improving economy (with the welfare-reform-related declines occurring despite the fact that pre-welfare-reform Medicaid eligibility rules remained in effect).[30] The spending slowdown also reflected somewhat slower growth in the number of elderly and disabled enrollees, for whom Medicaid-financed health care is extraordinarily expensive.[31]

According to the Congressional Budget Office, the re-acceleration of Medicaid spending in 1998 and 1999 "was in part the result of higher spending for relatively more costly services such as pharmaceutical products and noninstitutional long-term care (for example, home health care). Another factor pushing up spending was that states expanded eligibility for the program and began again to serve some adults and children who had lost Medicaid coverage as a result of welfare reform."[32]

Has Medicaid entered a new, slower-growth regime, or is the modest acceleration since 1997 a harbinger of further acceleration in the future, and perhaps even a return to Medicaid's old budget-busting ways? Medicaid and health care experts seem to believe that many factors will continue to result in real growth in Medicaid costs:

- ❖ According to analysis by The Urban Institute, there is some evidence that welfare-reform-related enrollment continued to decline in 1998, but this could turn around in the near future. Some states have been working to streamline procedures and improve outreach, and states are identifying children eligible for Medicaid as they implement the State Children's Health Insurance Program (S-CHIP).[33]
- ❖ The Congressional Budget Office projects that federal Medicaid expenditure growth will average 8.5 percent annually from 1999 through 2010, or 6 percent above their forecasted 2.5 percent rate of inflation (Consumer Price Index). They expect relatively rapid growth to result from (1) state actions such as increased reimbursement rates and modest eligibility expansions, financed in part by settlements with the tobacco industry, (2) upward pressure on managed care rates, and (3) increased use of noninstitutional long-term care and of pharmaceuticals.[34]
- ❖ The Health Care Financing Administration projects that state-local Medicaid expenditure growth will average 8.1 percent annually from 1999 through 2008, or 5.3 percent above their 2.8 percent forecasted rate of inflation (GDP deflator).[35] HCFA does not provide explicit explanations of their Medicaid forecasts, but key assumptions and conclusions underlying their overall health care expenditure projections include: (1) relatively little impact from the aging of the population, (2) slowing in the growth rate of managed care enrollment, (3) substantially slower growth in long-term care expenditures due to slowing growth in the population over age 85 and other factors, (4) growth in prescription drug spending of just over 10 percent annually, and (5) a slowing in the substitution away from inpatient acute care, and (6) medical price inflation averaging 1.5 to 1.8 percentage points faster than general price inflation, with the gap increasing over the forecast period.
- ❖ In a project for the Robert Wood Johnson Foundation, the Institute For The Future, a nonprofit research organization in Menlo Park, California, forecasted that Medicaid spending would increase by 8 percent annually over the next 7 to 12 years. They expect

> factors that led to a slowdown in overall health care costs in the 1990's to continue, and they expect relatively little effort by states to expand coverage, except for children.[36]

While forecasting Medicaid spending is error-prone, the analyses discussed above suggest that in the next 5-10 years Medicaid costs will grow far more slowly than in the early 1990's, but more rapidly than in recent years, perhaps averaging 5-6 percent above general price inflation.

It is hard to provide insight into which states will face the greatest budgetary pressures from changes in Medicaid spending. States with the fastest growing populations, such as those in the South and the West, are likely to have the fastest-growing enrollments, but these states also tend to spend less on Medicaid per enrollee than do Northeastern and Midwestern states. Furthermore, different kinds of enrollees have different expenses, with the elderly and disabled being far more expensive to care for than low-income adults and children. States that expand eligibility rapidly may not necessarily face the greatest increase in costs.

To provide a rough sense of the importance of Medicaid to different states' finances, Table 15 simply shows state-local Medicaid spending as a percentage of state general expenditures. This is not a true measure of budgetary importance because it includes locally financed Medicaid as well as state-financed spending – state-only Medicaid spending is not available from the Health Care Financing Administration. Most states don't require local governments to pay for Medicaid, so the local share is usually zero. New York is the state most affected by this, as local governments contribute up to 50 percent of the state-local amount of some Medicaid expenditures, and North Carolina is also affected; for most other states it will not matter.

Higher Education

Higher education, which in 1997 accounted for 12 percent of state spending and was the third-largest spending area, appears headed for modest growth. The National Center for Education Statistics projects that enrollment in public higher education institutions will rise by approximately 1.0 percent annually between 1999 and 2009, or about the same rate as the overall population. This is reasonably consistent with the Census Bureau's projections of the prime college-age population (17-24 year olds). It is quite a bit lower, however, than the estimate of 1.9 percent average annual growth used in the National Education Association report (see the section entitled "Recent Studies of the Fiscal Outlook for States"), which was based on the NCES projected growth rate for high school graduates rather than their projections for college attendance. In any event, the data we have available suggest that higher education should not place especially signification pressure on state finances in the coming decade.

Other Issues

Government's primary function is as a service provider, and as such it seems to suffer a malaise that the economist William Baumol called "cost disease." It is hard to improve productivity in the provision of many services. The classic example is the barber who took 30 minutes to give a haircut 40 years ago, and takes 30 minutes to give a haircut today. In the intervening 40 years, manufacturers and other industries made huge productivity gains – the real cost of a stereo has come down, the real cost of a car (adjusted for changes in quality) has come down, and the real cost of computers has come down. But it still takes 30 minutes to get a haircut and perhaps it still takes

Table 16
State-Local Medicaid as % of General Expenditures FY 1997

New York	17.5%
New Hampshire	12.6
Rhode Island	12.5
Connecticut	12.3
New Jersey	11.9
Massachusetts	11.7
Pennsylvania	11.3
Illinois	10.4
Maine	10.0
Maryland	9.6
Missouri	9.6
Tennessee	9.1
United States Average	8.8
Ohio	8.5
Washington	8.4
Florida	8.2
Texas	8.1
California	7.9
North Carolina	7.8
Colorado	7.7
Michigan	7.6
Minnesota	7.6
Vermont	7.0
Georgia	6.7
Kentucky	6.6
Delaware	6.6
Nebraska	6.5
Wisconsin	6.5
Indiana	6.2
Virginia	6.2
Kansas	6.1
Oregon	5.9
Hawaii	5.8
Alabama	5.7
South Carolina	5.7
South Dakota	5.7
Nevada	5.6
Iowa	5.4
West Virginia	5.4
Arizona	5.1
Louisiana	4.9
Arkansas	4.9
Mississippi	4.8
North Dakota	4.7
Oklahoma	4.3
Idaho	4.1
Montana	4.1
Wyoming	4.1
New Mexico	3.9
Alaska	3.1
Utah	2.7

Source: U.S. Bureau of the Census, U.S. Health Care Financing Agency

30 minutes at the motor vehicles bureau to renew an automobile registration. The price of many services, relative to goods, has gone up – inflation in service industries tends to be faster than inflation in goods industries.

But to what extent will this be true in the future? Service businesses seem to be making many productivity gains now as a result of the Internet, and perhaps the Internet will lead to productivity gains in government, reducing the effective price of some governmental services. If people can renew their car registration on line, or get a college degree at a virtual campus where one professor teaches hundreds of students rather than ten or 20 students, then the price of some government services may fall. Obviously it is far too early to predict whether and to what extent this will be a significant factor in government finances.

States Need the Ability to Manage Fiscal Risk

One important factor affecting state fiscal stability is the ability to manage bad news such as revenue shortfalls or expenditure overruns. States use a variety of mechanisms to manage the business cycle, including:

- ❖ Explicit "rainy day" reserve funds
- ❖ Use of internal resources and funds reserved for other purposes (often considered gimmicks)
- ❖ Spending deferrals and tax accelerations (often considered gimmicks)
- ❖ Tax increases
- ❖ Spending cuts

States' capacity to manage bad news is hard to measure. One of the most common measures that speaks partly to states' abilities to manage risk is the size of reserve funds, which are reported by the National

Association of State Budget Officers and the National Governors' Association in their twice-annual Fiscal Survey of the States.[37] States build reserves up in good times and draw them down in bad times, as Figure 6 shows: when gross domestic product growth slows or declines, as in the 1980-82 double-dip recession and as in the 1990-91 recession, reserves fall as a percentage of state spending, and when growth accelerates states rebuild reserves.

Table 17 below shows state-by-state balances at the end of fiscal 1998, and the remarkable variation in those balances.

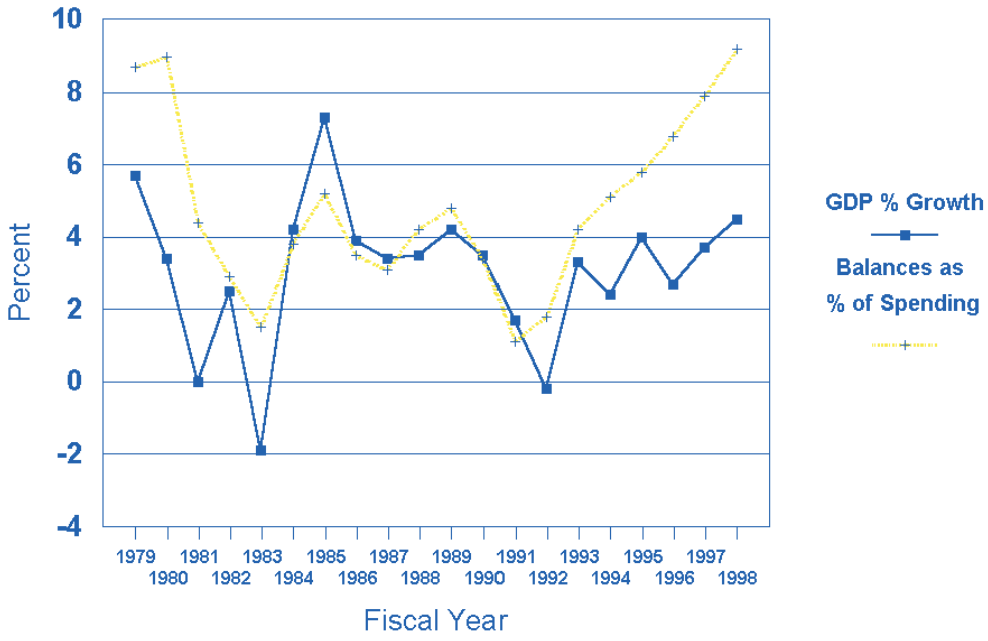
At the end of fiscal year 1998 state reserve funds, at 9.2 percent of spending, were at a 20-year high.[38] Is this enough to manage the next recession when it arrives, sooner or later? Probably not. First, inspection of the graph shows that states draw down reserves quite rapidly in a recession. In the relatively deep 1980-82 recession, states drew fund balances down from 9 percent in fiscal year 1980 to 1.5 percent in fiscal 1983, and in the relatively mild 1990-91 recession states drew reserves down from 4.8 percent in fiscal 1989 to 1.1 percent in fiscal 1991.

Furthermore, the use of reserves was dwarfed by other actions states took. Over the period from 1981 through 1985, cumulative state tax increases amounted to approximately 27 percent of state spending, dwarfing the 7.5 percent drawdown of reserves. Similarly, cumulative tax increases in the 1989 through 1994 period were 13 percent of state spending compared to a reserve drawdown of 3.7 percent.[39] In addition, states adopted large spending cuts during the two recessions, although there are no ready measures of aggregate spending cuts.

The Center on Budget and Policy Priorities, which favors using reserve funds to stabilize and support state-financed services during recessions, examined the adequacy of reserve funds for that purpose.[40] For its analysis, CBPP assumed that (1) a recession would slow state revenue growth for three years to somewhat less than half of its mid-1990's pace, based on an analysis of the 1990-91 recession (a relatively mild recession), and (2) spending growth, absent policy changes, would continue at its historical rate. CBPP concluded that state reserve funds in 40 states fell short of what would be needed to maintain spending in a recession without raising taxes, and that on average states would need to more than double their reserves, to 18.6 percent. CBPP concluded that a widely cited rule of thumb that states should maintain reserves equaling at least five percent of expenditures, often attributed to rating agencies and the National Conference of State Legislatures, is "of uncertain origin and even more questionable validity."

Even if one were to quibble with CBPP assumptions in reasonable ways, we believe their broad conclusion would still hold: state reserve funds fall far short of what would be needed to maintain spending without raising taxes, although many would disagree with this as a standard. States may keep reserves below the level needed to maintain spending in a recession for a number of reasons. For example, reserves can be hard to safeguard: the mere act of establishing reserves makes them visible, and subject to attack by groups who would rather use the money for spending or for tax cuts. Some states might prefer to use less-visible measures to smooth out finances during a recession, such as internal borrowing, revenue accelerations, and spending delays. But judging by the last two recessions, these relatively subtle mechanisms are limited, and after states exhaust the reserves they do maintain, they usually have to resort to much more severe actions such as spending cuts or tax increases.

Figure 6
Fund Balances and Economic Growth



Conclusions

From the perspective of fiscal stability, states were both lucky and good in the 1990's. They were lucky in that the economy, financial markets, and revenue grew far faster than they expected, and fast enough to more than make up for structural weaknesses in their revenue bases. They were good in that they rebuilt reserves that had been depleted after the last recession, raising them to a 20-year high – a high that would not, unfortunately, be sufficient to withstand even a modest recession.

Looking forward, states face a number of substantial risks to their revenue structures. The income tax has benefited from extraordinary growth in nonwage income and in the numbers of taxpayers in top tax brackets. Unfortunately, this sort of income is fragile and has a habit of declining sharply in recessions and during financial market declines. The income tax has become more volatile and more subject to downside risk.

The top five states with the most direct risk to their revenue structures if financial markets decline for a prolonged period are Colorado, Oregon, New York, Connecticut, and California, and based on the direct importance of capital gains to their revenue structure in 2000. Many other states would face substantial risk as well, especially if a market decline led to trouble in the financial services industry and to slowing in the broader economy.

At the same time that the income tax has become more volatile, it has become potentially more important. The sales tax base has been eroding, although it was propped up in the 1990's by a sharp

Table 17
Fund Balances as a Percentage of Expenditures
Fiscal 1998

Alaska	147.1
Nebraska	29.2
Delaware	28.4
Minnesota	24.7
Indiana	23.0
Colorado	22.2
Kansas	19.8
Iowa	19.6
Arizona	15.6
Nevada	14.5
Virginia	14.3
Maryland	13.3
North Dakota	13.3
Michigan	12.2
Oregon	11.6
Oklahoma	11.2
Mississippi	10.7
South Carolina	10.5
Rhode Island	10.4
Maine	10.0
Kentucky	9.3
U.S. Average	9.2
Georgia	9.1
North Carolina	9.1
Florida	8.4
Massachusetts	8.2
Wyoming	7.7
West Virginia	7.6
New Jersey	7.5
New Mexico	7.4
Missouri	7.2
New Hampshire	6.7
Illinois	6.1
Ohio	6.1
California	5.8
Washington	5.7
Wisconsin	5.7
Pennsylvania	5.3
Connecticut	5.1
Idaho	5.0
Hawaii	4.8
Utah	4.4
Montana	4.3
Tennessee	4.3
South Dakota	4.2
Vermont	4.1
Arkansas	2.1
New York	1.9
Louisiana	1.6
Alabama	1.1
Texas	n/a in 1998

increase in consumption relative to income – a decline in the savings rate – driven partly by exploding stock market values. The sales tax is likely to continue to erode due to the aging of the population and the continued shift toward service consumption. The erosion could accelerate significantly depending on how the issue of taxing goods and services purchased over the Internet is resolved.

Based on work by Donald Bruce and William Fox of the University of Tennessee, Nevada, Florida, Texas, Tennessee, and Washington are the top five states that appear to have the greatest near-term revenue risk if states cannot collect taxes on electronic commerce, but many states would face substantial risk over the longer term.

The impact of financial market exuberance has pervaded state revenue systems. It has led to skyrocketing capital gains, higher wage-like income as a result of incentive stock options, higher distributions from retirement accounts that have swelled due to higher stock values, and faster sales tax collections due to the "wealth effect" and its impact on consumption. If the financial markets were to turn down significantly, all of these effects would reverse, probably quite sharply.

The spending side of the state budget actually looks relatively benign. The largest spending area, elementary and secondary education, will benefit from slowing enrollment growth compared with the 1990's. However, although taxpayers may be suffering exhaustion from the large per-pupil spending increases of the last several decades, virtually all of the education policies currently being adopted will lead to higher, not lower, spending. With many states moving to fund a larger share of total education spending, they are likely to face policy-driven pressure to increase state education spending. The second-largest spending area, Medicaid, appears to have

recovered from a recent slowdown and now is poised for faster growth, albeit more moderate than in the early 1990's. These two large spending areas will place pressure on state finances, but it is unlikely to be as significant as in the late 1980's and early 1990's.

The overall picture is one of considerable risk to state budgets, mostly on the revenue side: the extremely rapid income and sales tax growth rates of the 1990's are almost certainly unsustainable and are likely to slow sharply in coming years. This could make it very difficult for states to finance even moderate growth in spending.

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Endnotes

1 State general revenue is a broad measure that includes taxes, fees and other charges, intergovernmental revenue, and various miscellaneous revenue sources. It excludes revenue from government-run utilities, revenue from government-run business-type activities such as liquor stores in some states, and revenue received by government controlled trust funds such as pension funds and unemployment insurance funds.

2 General expenditure is a broad definition of state spending, which includes almost all state expenditures except (1) payments from trust funds such as pension funds (although contributions to pension funds are counted) and unemployment insurance funds, and (2) payments by state-run business activities such as liquor stores in some states.

3 Cash assistance is a subcategory within the "Cash assistance and non-medical welfare assistance" category on the chart, with the larger category only accounting for 6.1 percent of state spending.

4 The range for total Medicaid spending is even larger than this suggests because New York, unlike most other states, requires counties to pay a significant share of Medicaid, and that local share is not even reflected in these numbers.

5 According to the study, The Finance Project is a consortium of private foundations interested in improving the "effectiveness, efficiency, and equity of public financing for education and other children's services."

6 Wallace, p.24.

7 Janofsky, February 18, 2000.

8 Even income taxes that are fully indexed for inflation can be elastic – real incomes rise in most years due to productivity gains, driving taxpayers into higher effective tax-rate brackets. Even "flat" taxes are progressive and elastic if they have a zero bracket amount or standard deduction, since that will lead to higher average rates as income rises.

9 The numbers in this section are based on the data files 97in01ag.xls and 97in02ag.xls obtained from the Statistics of Income web page on the U.S. Treasury's web site.

10 Technically, a high elasticity of nominal tax revenue to nominal income might suggest rapid revenue growth even in a slowing real economy, if nominal income growth is positive. But as the discussion that follows makes clear, elasticities are not fixed, and the nominal elasticity is likely to fall in such a circumstance.

11 See Center for the Study of the States, State Revenue Report # 39.

12 See Congressional Budget Office, January 2000, pages 53-56, for a discussion of some of these other factors. It also is a good discussion of how rising financial asset values have impacts throughout the tax system, not just in the capital gains component of adjusted gross income.

13 California Legislative Analyst's Office, page 42.

14 The numbers in the table are obtained by applying the tax-rate schedule for each hypothetical tax system to average taxpayers in each of several income classes, using the actual national income distribution in 1997 based on data from the U.S. Treasury Department's Statistics of Income Division. The estimates assume 2 percent growth in the number of returns, 5 percent growth in non-capital gains income, 4 percent growth in exemptions and deductions, and 5 percent growth in capital gains in the baseline case and a 30 percent decline in the gains-falloff case.

15 This is mixing oranges and tangerines. The elasticities reported in the table are in nominal terms and the Dye/McGuire elasticities are in real terms. Nonetheless, the concepts are reasonably analogous.

16 In the event of a capital gains falloff, the slowdown in tax liability growth would appear even more severe than shown above when compared to personal income growth rather than AGI growth — personal income growth would not necessarily slow by as much as adjusted gross income growth slows, because capital gains are not included in the definition of personal income. The elasticity of tax liability relative to personal income would decline by even more than the elasticity of tax liability to adjusted gross income.

17 Most states with income taxes adopt federal definitions of income, and most of those states include substantially all realized gains fully in income. Some states, however, exclude large amounts of capital gains from tax, and the index has been adjusted to account for this. Arkansas excludes 70% of capital gains from income; South Carolina excludes 44% of capital gains held for two or more years from income, which we estimate amounts to an exclusion of 34.7% of total gains (short term plus long term); and Wisconsin excludes 60% of net capital gain from assets held more than one year, which we estimate excludes 53.3% of total gains. Massachusetts is phasing down its tax on capital gains so that in the 2001 tax year the rate on

gains from assets held six or more years will be zero, with rates ranging up to 5% for long-term gains held for shorter periods, and with a rate of 12% on short-term gains. We estimate that in tax year 2000, this rate schedule is comparable to a 39.3% exclusion of total capital gains. In a draft of this report based on the 1999 tax year, provided to and cited in the *Wall Street Journal*, the estimated exclusion was only 18%, leaving Massachusetts with the highest capital gains risk of any state given its high level of realized gains and its high reliance on the income tax. With the new estimates, based on the 2000 tax year, Massachusetts still has high capital gains risk, but well below the 1999 estimate, dropping it from first place to seventh place. In addition, the previous estimates did not capture the Wisconsin exclusion.

18 The national average for capital gains as a percentage of adjusted gross income was 7.0 percent.

19 We consider this more than just a measure of the direct importance of capital gains, but rather also a measure of the importance of financial markets to state finances.

20 The national average for the income tax as a percentage of revenue was 18 percent.

21 This measure ignores the role of progressivity and treats two states with the same amount of capital gains, relative to adjusted gross income, the same. In fact, if one of these states has a more progressive tax than the other, capital gains will be more important to that state's income tax since gains are concentrated in upper income brackets.

22 It also does not take into account differences in tax progressivity across states. Since capital gains are highly concentrated among very high-income individuals, states with very progressive income taxes, such as California, could be at greater risk than the index suggests.

23 New Jersey's relatively low position on the list is surprising. It is a relatively high-income state, with a distribution of income that is more skewed toward high-income taxpayers than the national average. Nonetheless, the data show New Jersey with only about 85 percent of the national average amount of capital gains as a share of adjusted gross income in 1997. This is not just an artifact of the1997 data year – it was also true in 1996, and again in 1998 according to data for 1998 made available by the Statistics of Income branch of the U.S. Department of the Treasury. The data show that New Jersey's relatively low level of capital gains reflects lower average capital gains at every level of income than in the nation as a whole, rather than fewer returns with capital gains. Staff of the Statistics of Income branch had no explanation for this seemingly surprising set of facts.

24 Not surprisingly, states without income taxes generally have very high capital gains as a percentage of adjusted gross income.

25 See Bruce and Fox, February 2000. Also see Merriman and Skidmore, 1997.

26 Bruce and Fox did not report an estimate for a "typical" state. The 1.75 percent figure is the median of the estimates for individual states.

27 Bruce and Fox presented potential revenue loss as a percentage of tax revenue. We prefer to use the broader denominator of general revenue.

28 See Coughlin and Pollard, January/February 2000.

29 Disproportionate share payments (DSH) are payments to certain hospitals that serve a disproportionate share of poor clients. In the early 1990's many states used these payments as a mechanism to obtain increased reimbursement from the federal government, and Congress subsequently curtailed these payments. When these payments increased rapidly, they actually reduced stress on state budgets, and when they subsequently declined rapidly, they increased stress on state budgets. Including DSH payments in total Medicaid spending would overstate the stress that Medicaid growth placed on state budgets in the early 1990's and understate the stress on budgets when Medicaid growth slowed due to curtailment of DSH. Total Medicaid spending including DSH payments grew by 27.1% on average in the 1990-92 period (rather than the 18.4% shown in the table) and grew by only 2.3% in 1996 (rather than 5.3% shown in the table); the impact of excluding DSH is smaller in other years.

30 Ku and Garrett, February 2000.

31 This discussion is based on Bruen and Holahan, November 1999.

32 Congressional Budget Office, January 2000, p. 83.

33 See Bruen and Holahan, page 9.

34 Congressional Budget Office, p.83.

35 Smith et al., derived from Exhibit 1.

36 See Institute for the Future, pp.29-32, page 33 endnote 4, and pages 41 and 42.

37 Another measure that also speaks to a state's ability to manage fiscal risks is a state's bond rating. We do not look at bond ratings here because they also measure many other things. Ultimately, these ratings reflect a rating agency's perception of a state's ability and willingness to repay debt in a timely fashion, which is a far broader question than ability to maintain spending or avoid tax increases in a recession; it involves assessments of the strength of a state's management and procedures, the strength of its economy, and many other factors. Although there is some correspondence between state bond ratings and the size of reserve funds, there is not much. Delaware and Minnesota, which have large reserves, also happen to have Moody's highest rating of Aaa, and Louisiana and New York, which have low reserves also have Moody's lowest (A3) and second-lowest (A2) ratings respectively. But Tennessee and Utah, which have the highest rating, have relatively low reserves, and Rhode Island and Massachusetts, with relatively high reserves, are only one notch above New York at A1.

38 In estimates reported to the National Association of State Budget Officers, states indicated their intent to draw reserves down in fiscal year 1999, and again in 2000, but we did not include these estimates in our graph because recent history has shown that even when states intend to draw down reserves they end up increasing them if revenue collections exceed expectations, as is likely to have occurred in 1999 and 2000.

39 States tend to increase taxes after a recession ends, as it takes time to respond to unanticipated bad news. As a result, we count tax increases occurring shortly after a recession ends as recession-related increases.

40 *When It Rains It Pours*, Center on Budget and Policy Priorities.