

Recessions and State-Local Finances

Presentation to Fidelity Investments

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Affiliation given for identification purposes only

Topics

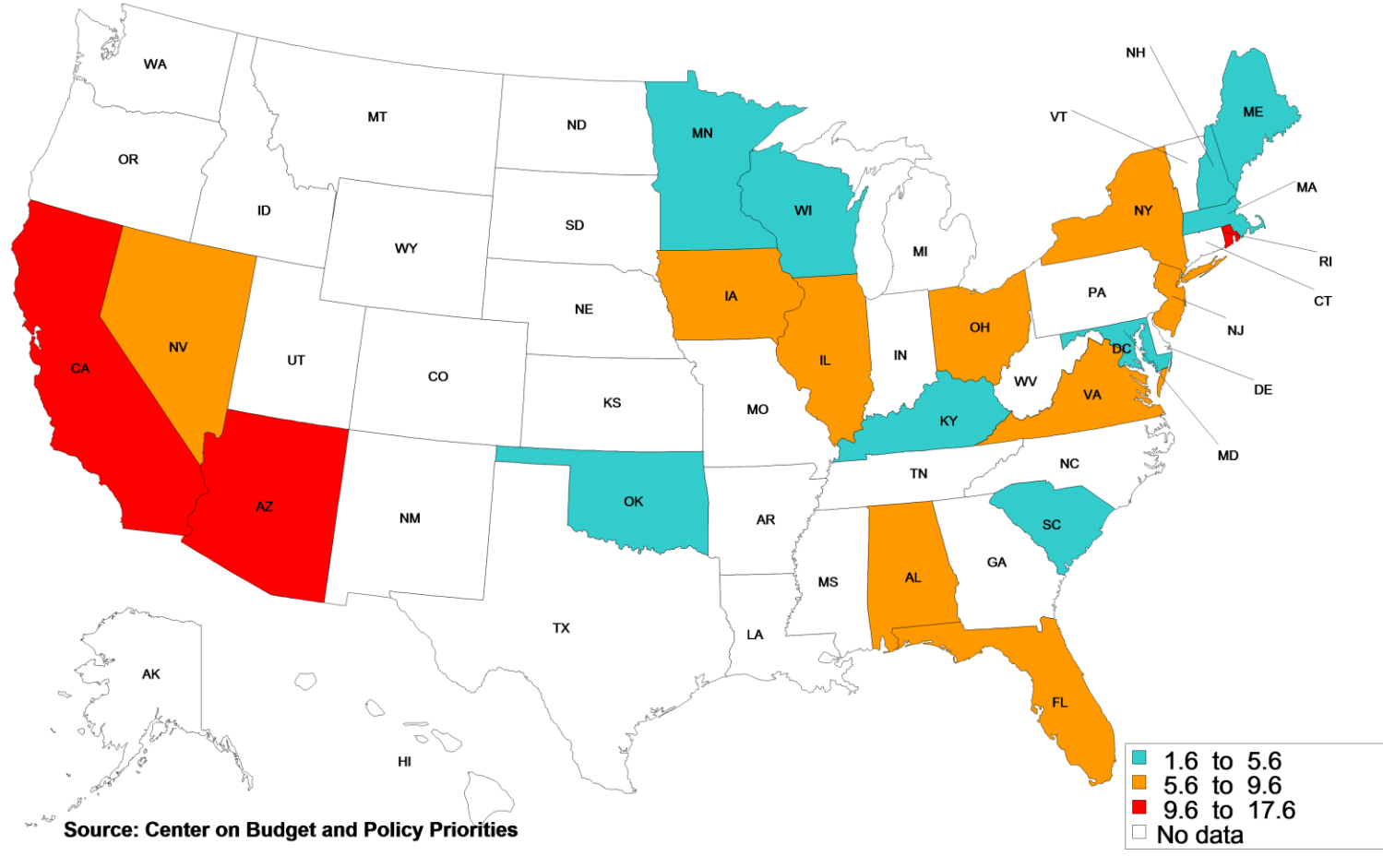
- Current situation
- This recession and prior recessions
- Tax revenue volatility and the last recession
- State responses to fiscal crisis

Current situation

- Bursting housing bubble has caused sales tax to slow; some property tax weakening
- Overall tax revenue – real decline in July-Sept (1st time in 4 years). But there are lags in the system – income tax, property tax
- Oct-Dec was worse but not fully tallied
- Apr-June (income tax returns) is crucial. First 3 estimated payments up 12% - reversal coming?
- At least 25 states face budget gaps in 2008-09
- Fund balances at year-end 2007 were right about where they were at year-end 2000 – 10%. Tend to be smallest in northeast and California

State budget gaps

Projected 2008-09 Budget Gaps as % of General Fund



Recent recessions and revenue

Recent recessions

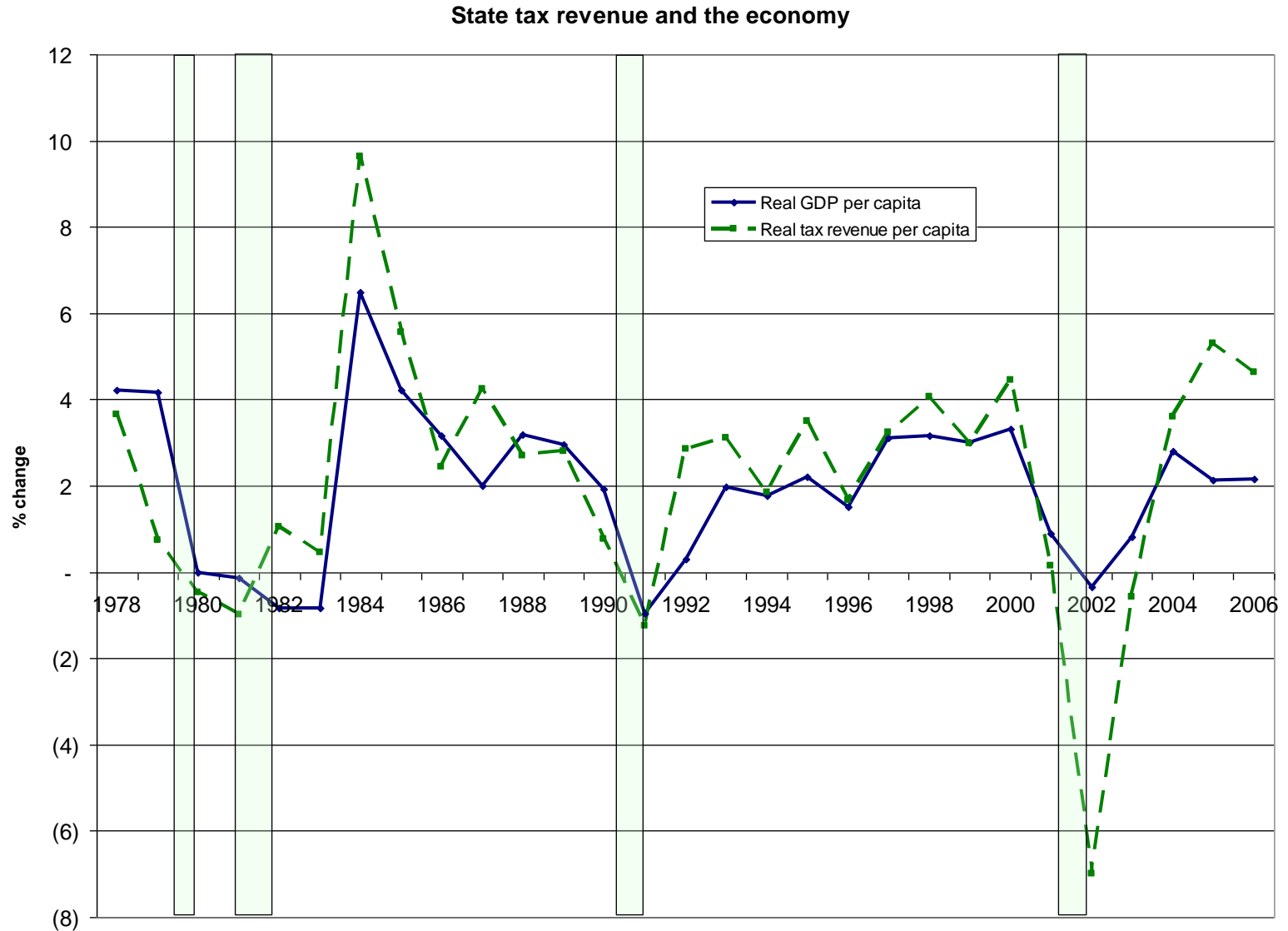
Post-war recessions

Recession:	Gross domestic product % change	Duration of contraction (months)	Length of prior expansion
1948-49	-1.7%	11	37
1953-54	-2.7%	10	45
1957-58	-3.2%	8	39
1960-61	-1.6%	10	24
1969-70	-0.6%	11	106
1973-75	-3.1%	16	36
1980	-2.2%	6	58
1981-82	-2.6%	16	12
1990-91	-1.3%	8	92
2001	0.0%	8	120
Post-2001			75

(Feb 2007)

Sources: Rockefeller Institute analysis of data from National Bureau of Economic Research for recession dates, and U.S. Bureau of Economic Analysis for GDP change.

Tax revenue and the economy, recent recessions



Revenue shortfalls, last 2 recessions

Medians of state revenue shortfalls for major taxes, 2 recession periods

1990 recession period

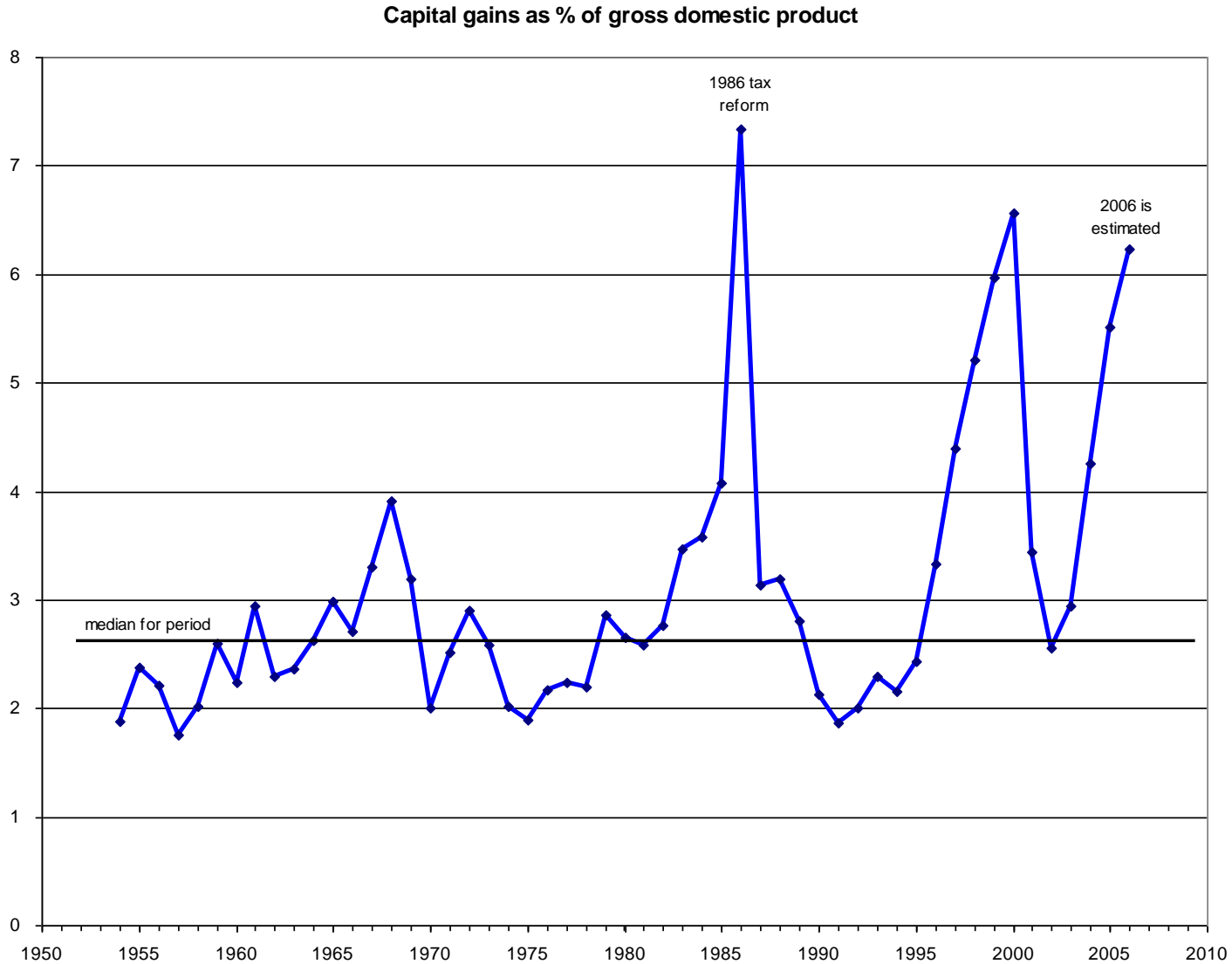
Fiscal year	Sales tax	Income tax	Corporate tax	Median for sum of major taxes
1990	-0.4%	0.6%	-10.6%	-0.7%
1991	-2.3%	-2.4%	-9.9%	-2.6%
1992	-1.1%	-2.4%	-3.5%	-1.7%
Sum	-3.9%	-4.2%	-24.0%	-5.0%

2001 recession period

Fiscal year	Sales tax	Income tax	Corporate tax	Median for sum of major taxes
2001	-0.3%	0.2%	-6.5%	-0.6%
2002	-3.5%	-10.8%	-24.3%	-8.7%
2003	-1.5%	-7.0%	-4.6%	-5.1%
Sum	-5.3%	-17.5%	-35.4%	-14.4%

Source: Rockefeller Institute analysis of data from NASBO/NGA Fiscal Survey of the States, Fall of relevant year.

Capital gains are again atypically high

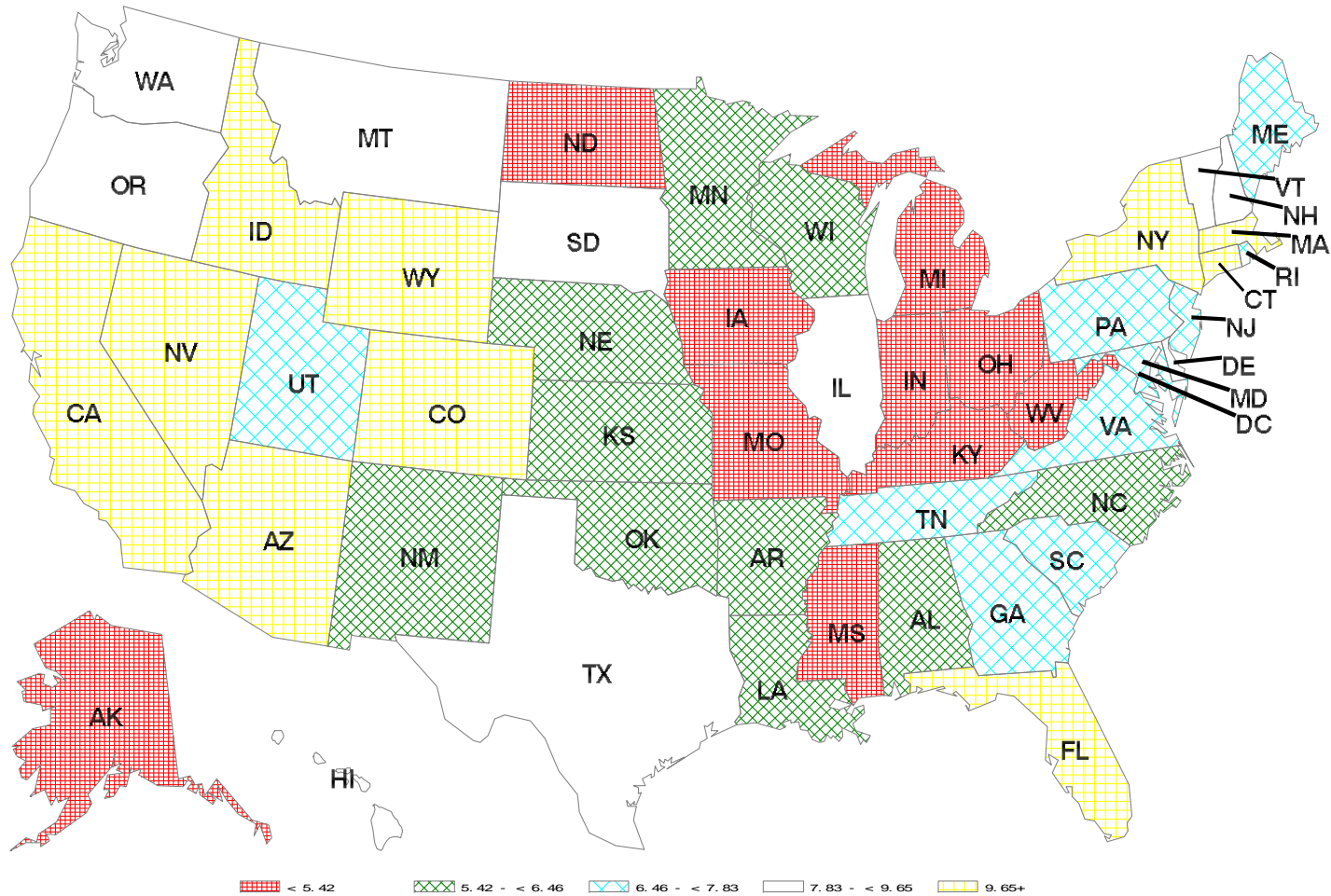


Why capital gains are important

- Extraordinarily concentrated: top 0.3% of taxable returns (AGI \geq \$1m) had 58.1% of net gains in 2005
- These are all top-bracket taxpayers
- Gains are very sensitive to economic/financial conditions, in hard-to-predict ways
- Many gains are highly discretionary – take them, or not – depending on tax planning strategies, policy choices, etc.
- Timing of tax payments related to gains – volatile and lumpy (December/January, April/May)
- Wreaks havoc on state finances

Capital gains by state

Capital gains as % of AGI in 2005



'Source: Rockefeller Institute analysis of data from IRS'

Sales tax reliance

State reliance on sales tax as share of tax revenue, 2005

	<i>U.S. Median</i>		<i>30.4</i>
Washington	61.6	Maine	30.4
Tennessee	61.1	Wyoming	30.0
Florida	56.2	Iowa	29.9
South Dakota	56.0	Pennsylvania	29.6
Nevada	51.4	North Dakota	29.2
Texas	49.9	New Jersey	28.6
Hawaii	48.2	Kentucky	28.5
Mississippi	47.6	Connecticut	28.2
Arizona	47.3	Illinois	27.2
Nebraska	39.9	Minnesota	26.5
South Carolina	39.7	Colorado	26.2
Arkansas	39.3	Alabama	26.1
Indiana	38.9	West Virginia	25.5
Idaho	38.5	North Carolina	24.7
Utah	36.5	Oklahoma	24.2
Kansas	35.6	New York	21.9
New Mexico	34.8	Massachusetts	21.6
Michigan	34.3	Maryland	21.4
Ohio	34.1	Virginia	19.4
Georgia	33.9	Vermont	13.9
Louisiana	33.1	Alaska	-
United States	32.9	Delaware	-
Rhode Island	32.1	Montana	-
Missouri	31.8	New Hampshire	-
Wisconsin	30.7	Oregon	-
California	30.4		

Source: U.S. Bureau of the Census

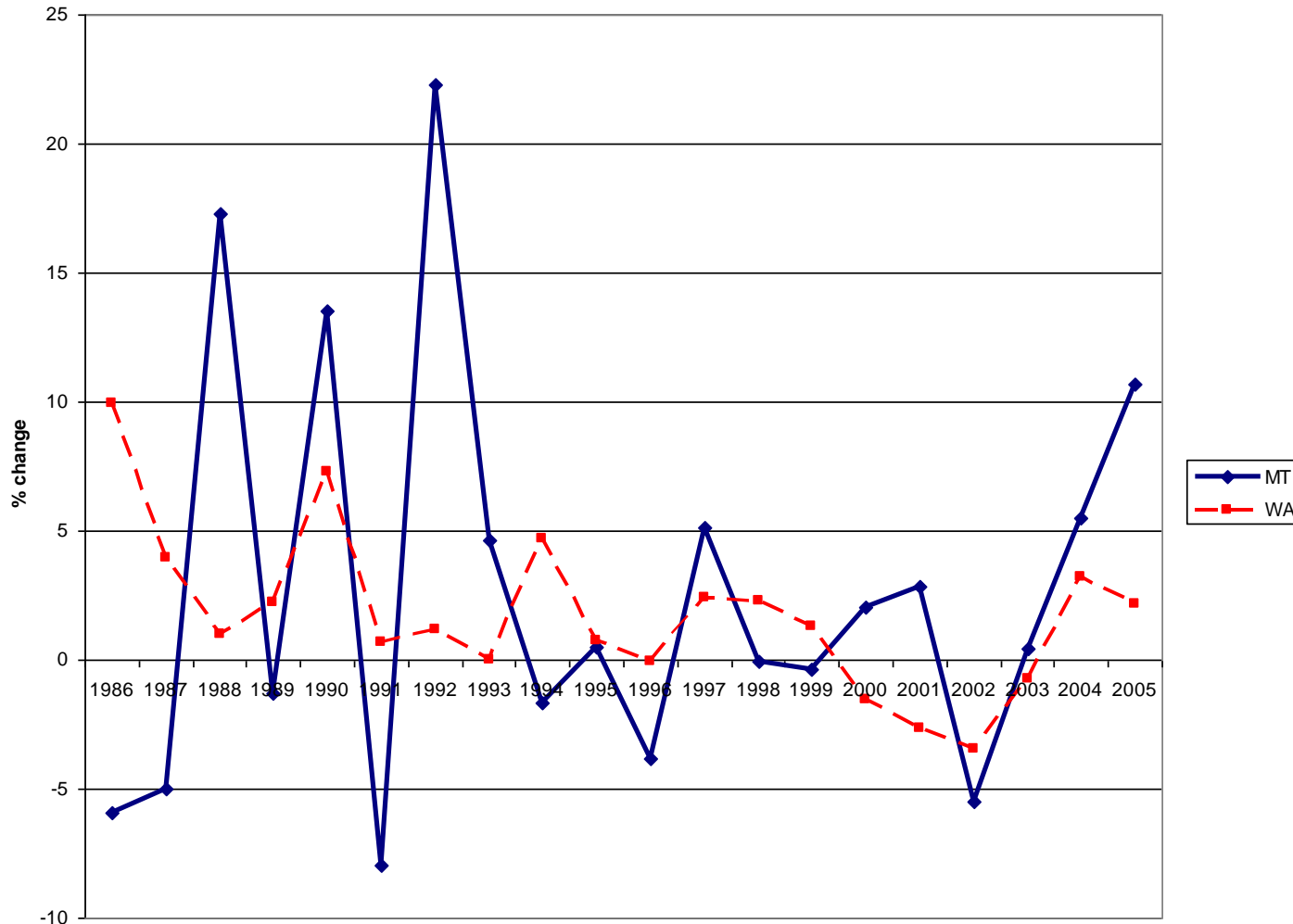
Revenue volatility

Sources of revenue volatility

- Economic volatility, concentration
- Reliance on tax structure focused on a small share of the economy
- Structure of individual taxes
- Legislative changes

Measuring tax revenue volatility: standard deviation of % change in real per-capita revenue

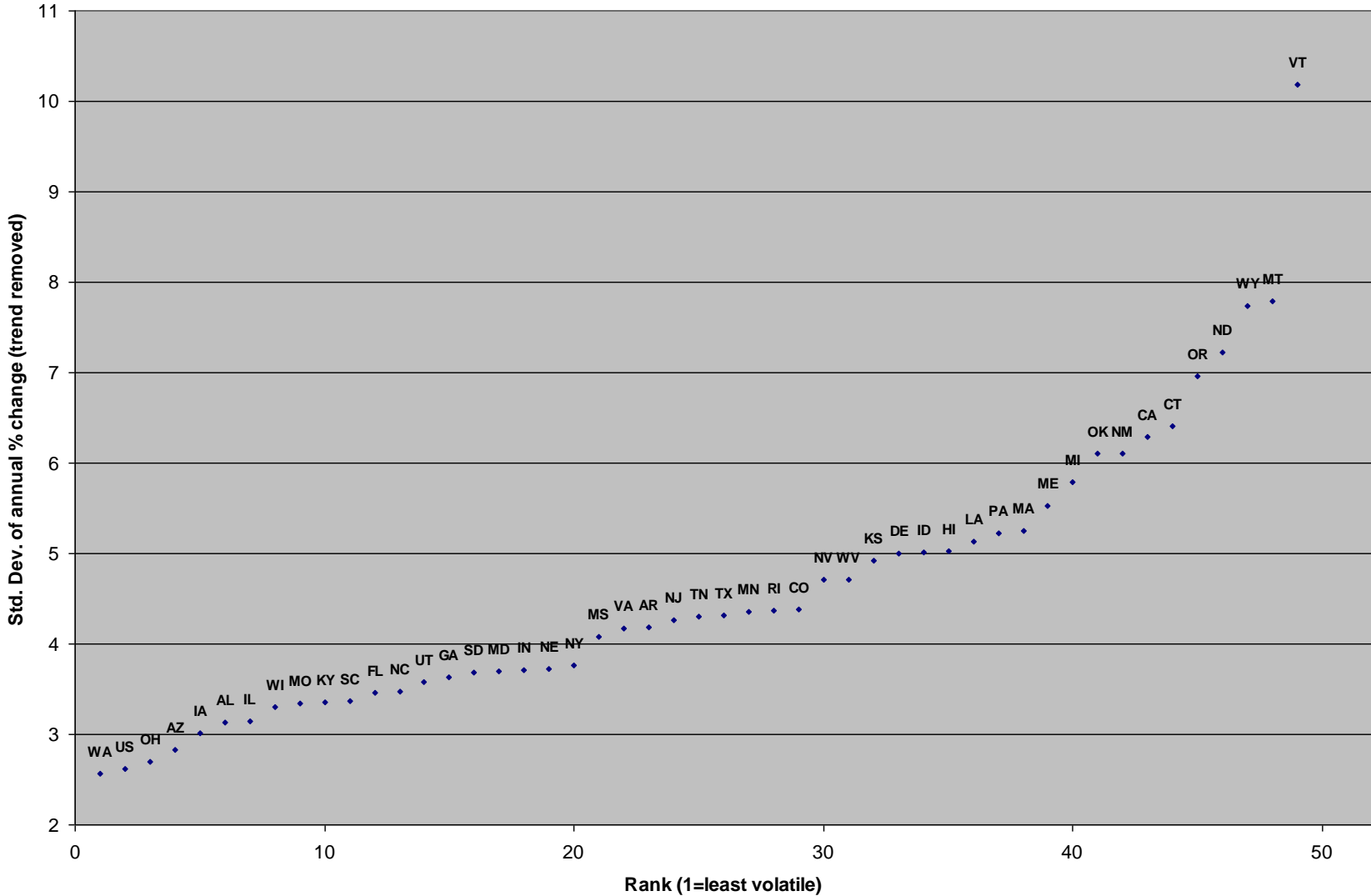
Year-over-year % change real per-capita state tax revenue
For Washington (relatively stable state) and Montana (volatile state)



State government tax revenue volatility

(Reflects multiple sources of volatility – economic, tax structure, and legislative)

State government tax volatility -- 1986-2005
(Extreme outliers excluded: AK=27.2, NH=17.6)



State government tax revenue volatility

(Reflects multiple sources of volatility – economic, tax structure, and legislative)

State government tax volatility index Larger values indicate more-volatile taxes

Median: 4.3

Alaska	27.2	Texas	4.3
New Hampshire	17.6	Tennessee	4.3
Vermont	10.2	New Jersey	4.3
Montana	7.8	Arkansas	4.2
Wyoming	7.7	Virginia	4.2
North Dakota	7.2	Mississippi	4.1
Oregon	7.0	New York	3.8
Connecticut	6.4	Nebraska	3.7
California	6.3	Indiana	3.7
New Mexico	6.1	Maryland	3.7
Oklahoma	6.1	South Dakota	3.7
Michigan	5.8	Georgia	3.6
Maine	5.5	Utah	3.6
Massachusetts	5.3	North Carolina	3.5
Pennsylvania	5.2	Florida	3.5
Louisiana	5.1	South Carolina	3.4
Hawaii	5.0	Kentucky	3.4
Idaho	5.0	Missouri	3.3
Delaware	5.0	Wisconsin	3.3
Kansas	4.9	Illinois	3.1
West Virginia	4.7	Alabama	3.1
Nevada	4.7	Iowa	3.0
Colorado	4.4	Arizona	2.8
Rhode Island	4.4	Ohio	2.7
Minnesota	4.4	Washington	2.6

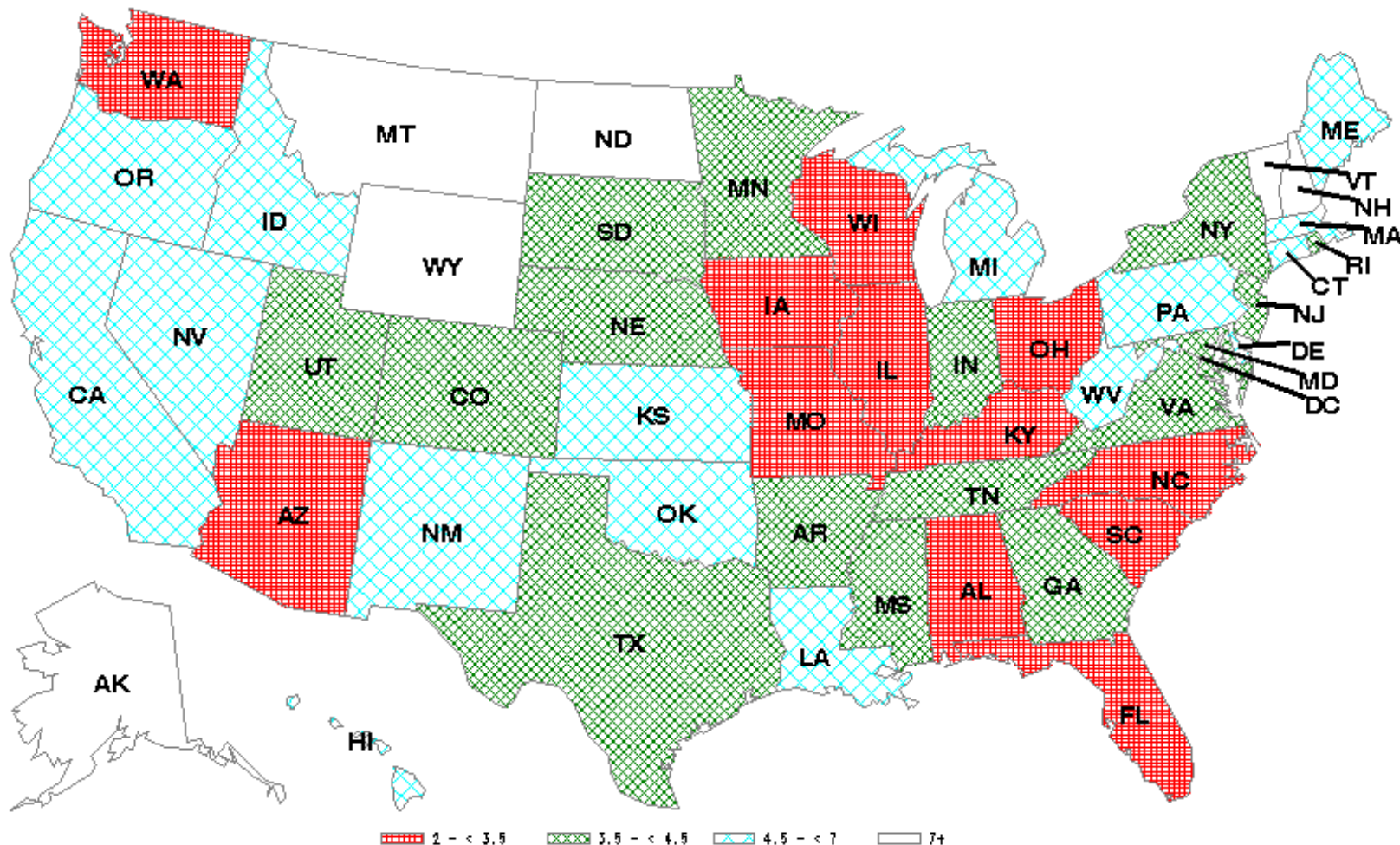
Measure: Standard deviation of year-to-year percentage changes in real per-capita state government tax revenue (trend removed), 1986 to 2005.

State government tax revenue volatility

(Reflects multiple sources of volatility – economic, tax structure, and legislative)

State government tax volatility 1986–2005

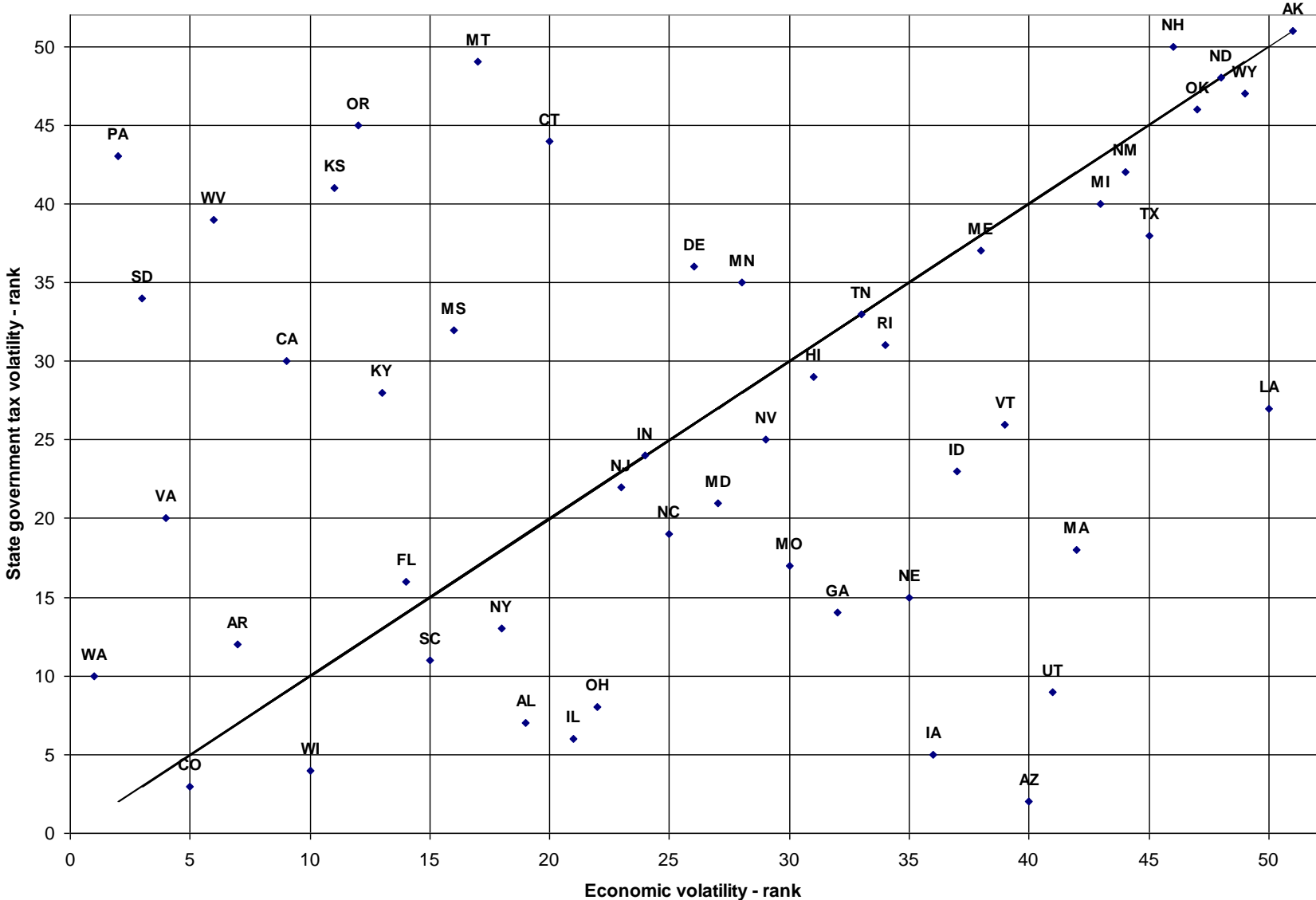
Based on year-to-year percentage change in real per-capita tax revenue



Source: U.S. Bureau of the Census

State economic volatility and state government tax revenue volatility (high rank = high volatility)

Volatility 1986-2005



Factors influencing state government tax revenue volatility highest and lowest states

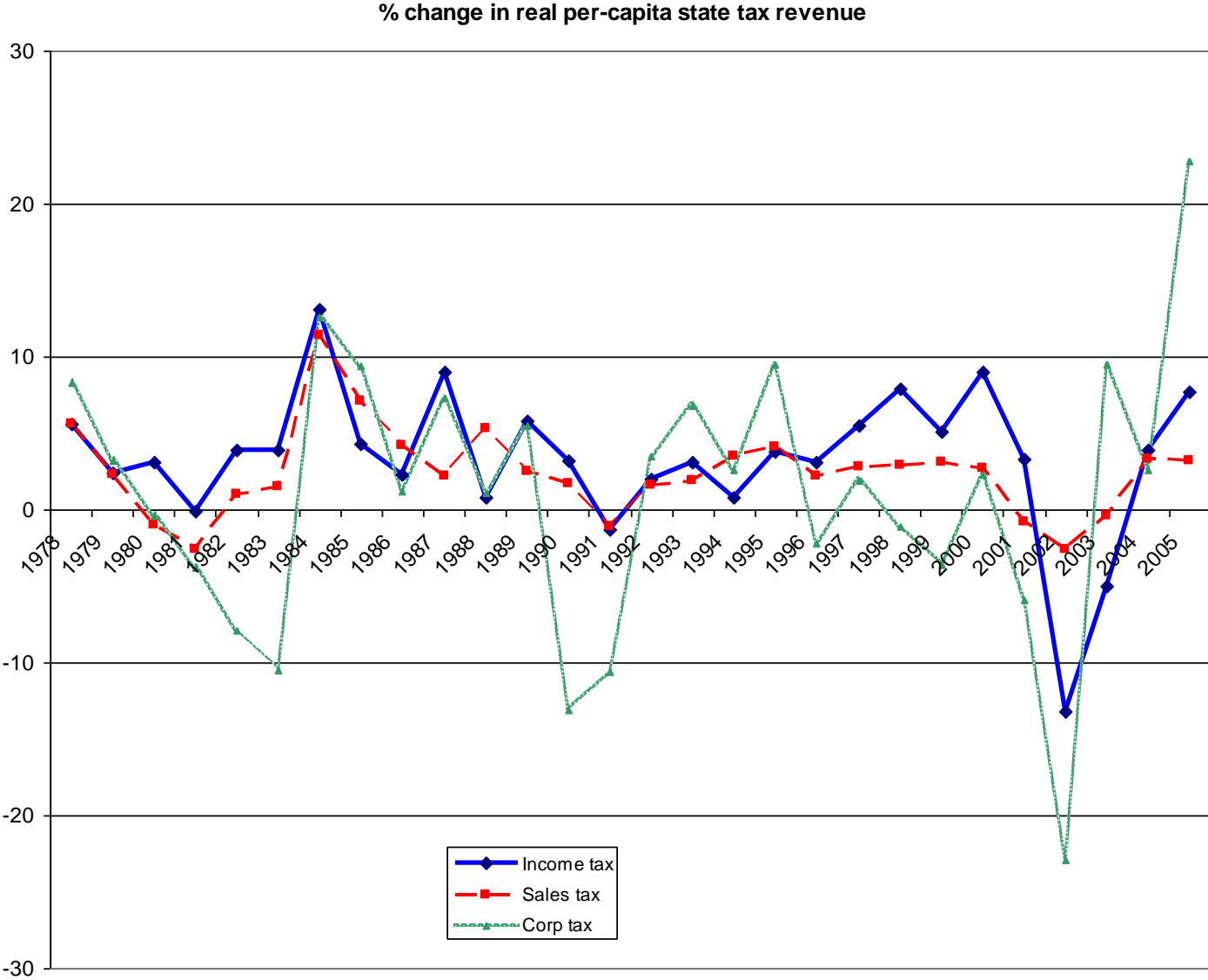
Tax volatility and tax structure, 1986 through 2005 State government taxes

	<u>4 highest-volatility states</u>				US Median	<u>4 lowest-volatility states</u>			
	Alaska	New Hampshire	Vermont	Montana		Iowa	Arizona	Ohio	Washington
State government tax volatility index	27.2	17.6	10.2	7.8	4.3	3.0	2.8	2.7	2.6
Economic volatility index	9.3	3.1	2.4	1.6	2.0	2.1	2.1	1.6	2.1
Tax structure % shares (1986-2005 average)									
Income tax	-	4.8	32.5	33.2	32.4	36.8	24.7	37.1	-
General sales tax	-	-	18.5	-	31.7	31.7	45.1	32.1	59.9
Property tax	4.9	7.1	8.3	13.3	0.5	-	4.4	0.1	15.1
Other taxes	95.1	88.1	40.7	53.5	31.8	31.5	25.8	30.7	25.0
Typical annual +/- % change (1986-2006 standard deviation)									
Income tax	na	12.3	8.8	7.3	7.3	5.3	6.8	5.1	na
General sales tax	na	na	7.5	na	4.9	5.8	3.3	4.5	3.5
Property tax	5.9	nm	nm	47.9	35.0	na	12.2	28.7	7.8
Other taxes	29.0	14.8	5.9	7.6	6.1	4.5	5.7	4.1	4.0
Contribution to volatility (% share of variance)									
Income tax	-	0.1	7.3	9.6	29.4	32.1	36.6	48.6	-
General sales tax	-	-	1.6	-	13.2	26.4	28.0	30.4	46.4
Property tax	0.0	29.2	71.9	21.2	0.1	-	4.3	0.0	16.5
Other taxes	100.3	62.5	4.7	31.4	21.9	17.1	25.8	20.5	10.7
Interaction (covariance among taxes)	(0.3)	8.3	14.5	37.8	21.7	24.5	5.4	0.5	26.4
Portfolio effect	(2.5)	(99.6)	(96.2)	(58.6)	(36.8)	(34.3)	(49.3)	(43.1)	(32.4)
Other volatility indicators									
# of state legislative changes > +/- 2%, 1990-2005	1	9	8	7	4	3	7	6	4
State-local government tax volatility index	19.6	7.7	5.0	5.0	3.1	2.4	2.2	1.8	1.6
Local government tax volatility index	3.5	11.4	13.8	7.4	3.2	4.0	3.6	1.9	2.3
State government tax volatility 1995-2005	28.6	15.8	12.9	3.8	3.8	3.5	3.3	2.7	2.1
State government tax volatility 1986-1995	27.7	18.6	4.3	9.9	4.3	2.0	1.7	2.5	2.7
Alternative measure: State government tax deviation from trei	21.2	14.6	11.5	7.6	5.1	5.7	2.6	2.8	4.4

Which taxes are most volatile?

- Research: No clear “winner” – sometimes income tax, sometimes sales tax
- Structure of each individual tax affects its volatility – e.g., food in the sales tax?
Progressive income tax rates?
- Structure of recession matters
- Furthermore, there are portfolio effects

Which taxes are most volatile?



Lessons about volatility

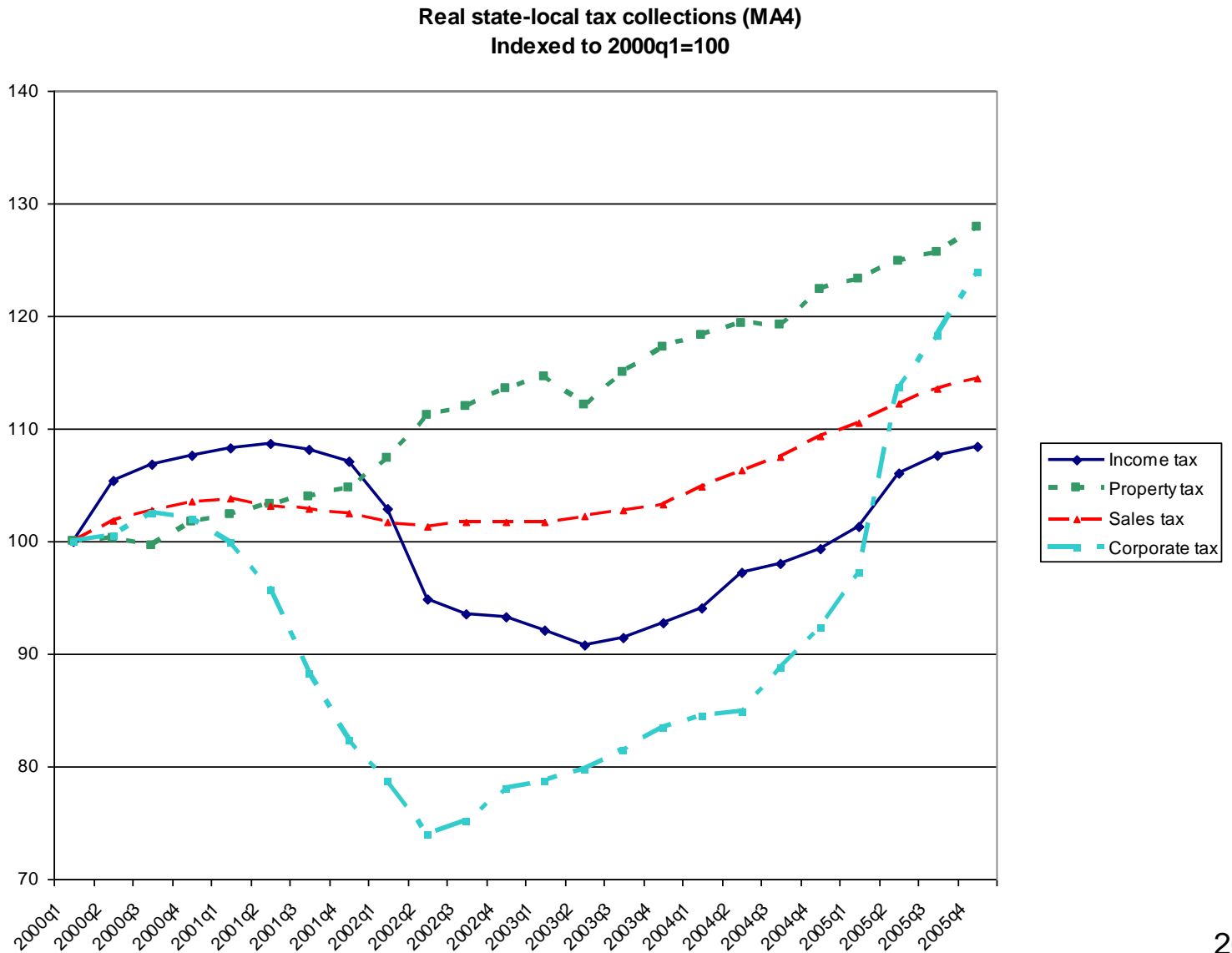
- Even states with relatively low volatility have far more volatility than they can manage
- Even states with low volatility on average (CO, NY) can have great fiscal difficulty in the right environment
- A structure that is stable in one environment can be volatile in another
- Management tools are key

Managing revenue volatility

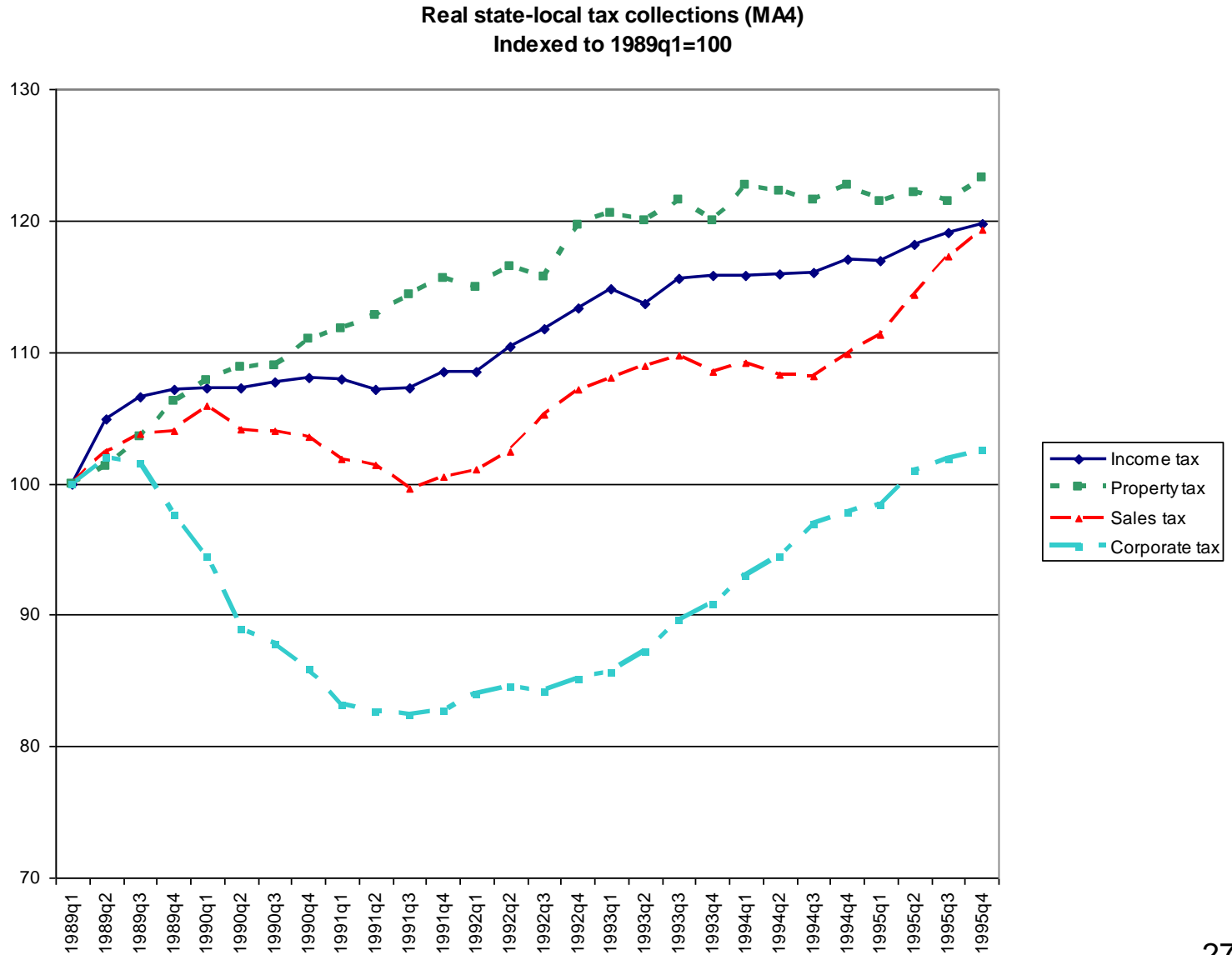
- Avoid volatility: diversified revenue portfolio, stable individual taxes – but tax-policy downsides
- Hedge volatility? Not yet!
- Seek budget balance over the business cycle?
- Reserve funds, pooled reserves
- Gimmicks, business as usual

Thinking about
local taxes...

Property tax usually holds up well (2001 recession)



Property tax usually holds up well (1991 recession)



Shares of local government taxes

Local government taxes by type as share of total local taxes, 2005

	Property Tax	General Sales Taxes	Individual Income	Other		Property Tax	General Sales Taxes	Individual Income	Other
New Hampshire	98.3	-	-	1.7	Hawaii	75.1	-	-	24.9
Maine	98.1	-	-	1.9	North Carolina	74.4	18.9	-	6.7
Connecticut	97.9	-	-	2.1	South Dakota	73.5	21.3	-	5.2
New Jersey	97.8	-	-	2.2	Virginia	71.3	8.1	-	20.6
Rhode Island	97.2	-	-	2.8	Pennsylvania	71.1	1.0	17.0	10.9
Massachusetts	96.3	-	-	3.7	Delaware	70.7	-	7.2	22.1
Montana	95.9	-	-	4.1	Georgia	69.0	19.9	-	11.1
Vermont	94.0	1.3	-	4.7	Utah	68.5	18.0	-	13.5
Mississippi	93.4	0.0	-	6.5	Ohio	67.4	8.2	20.6	3.8
Wisconsin	93.1	3.2	-	3.7	California	66.2	15.8	-	18.0
Idaho	92.4	-	-	7.6	Tennessee	65.1	24.2	-	10.7
Michigan	91.5	-	3.9	4.6	Arizona	64.9	24.8	-	10.3
Minnesota	91.3	1.3	-	7.4	Nevada	64.4	4.4	-	31.3
Indiana	89.9	-	7.1	3.0	Washington	62.0	18.4	-	19.5
North Dakota	86.1	9.6	-	4.3	Colorado	61.5	29.7	-	8.8
Iowa	83.5	11.1	1.5	3.9	Missouri	59.7	23.3	3.9	13.2
Texas	83.3	10.7	-	6.0	New York	56.1	16.6	11.1	16.3
South Carolina	83.2	2.8	-	14.0	Kentucky	55.9	0.3	23.8	20.0
Illinois	82.0	5.1	-	12.9	Oklahoma	53.5	39.5	-	7.1
West Virginia	80.4	-	-	19.6	New Mexico	51.5	37.5	-	11.1
Kansas	80.0	14.0	-	6.0	Maryland	48.7	-	33.6	17.7
Alaska	78.0	14.5	-	7.5	Louisiana	42.1	49.7	-	8.2
Florida	77.4	3.9	-	18.7	Arkansas	41.0	50.2	-	8.8
Oregon	77.2	-	2.8	20.0	Alabama	40.2	38.6	2.8	18.5
Wyoming	76.2	17.2	-	6.7	District of Columbia	26.4	19.7	26.7	27.2
Nebraska	75.3	9.0	-	15.7					

Response to fiscal crisis

Timing of response

- Drawdown reserves – never big enough
- Midyear budget cuts – often practical limitations
- Initial whack at problem – timing can be problematic (as in now)
- A second whack – 2009-10 budgets

Fiscal crisis and the timing of response

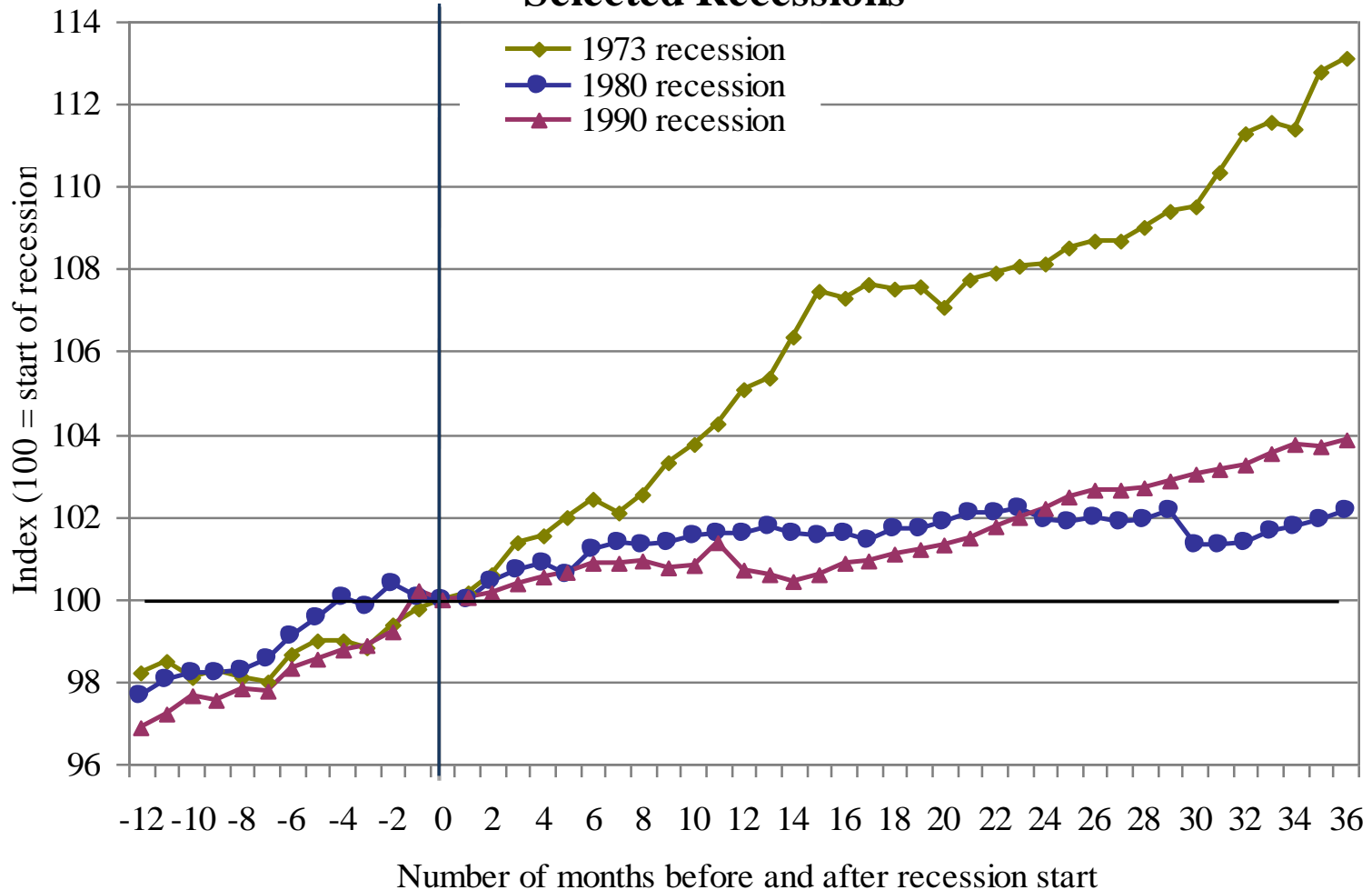
- The 2001+ crisis -

Fiscal year	Indicators of the magnitude of the crisis		Responses as % of tax revenue (Positive numbers reduce the budget gap)			What happened to total spending?
	Real per-capita tax revenue growth	Revenue shortfall (income, sales, and corporate taxes)	Use of fund balance	Midyear budget cuts	Tax and revenue enactments	Growth in real per-capita spending financed from own sources
2001	0.1%	-0.1%	0.8%	0.3%	-1.0%	3.4%
2002	-7.0%	-9.5%	4.8%	2.6%	0.1%	2.0%
2003	-0.6%	-6.6%	0.3%	1.5%	1.5%	0.3%
2004	3.6%	1.6%	-1.9%	0.4%	1.6%	-2.2%
2005	5.3%	4.2%	-2.9%	0.1%	0.5%	2.7%

Sources: Rockefeller Institute analysis of (1) data on fund balances, midyear budget cuts, and tax and revenue enactments from NASBO/NGA Fall Survey of the States, and (2) Tax and expenditure data from the Census Bureau.

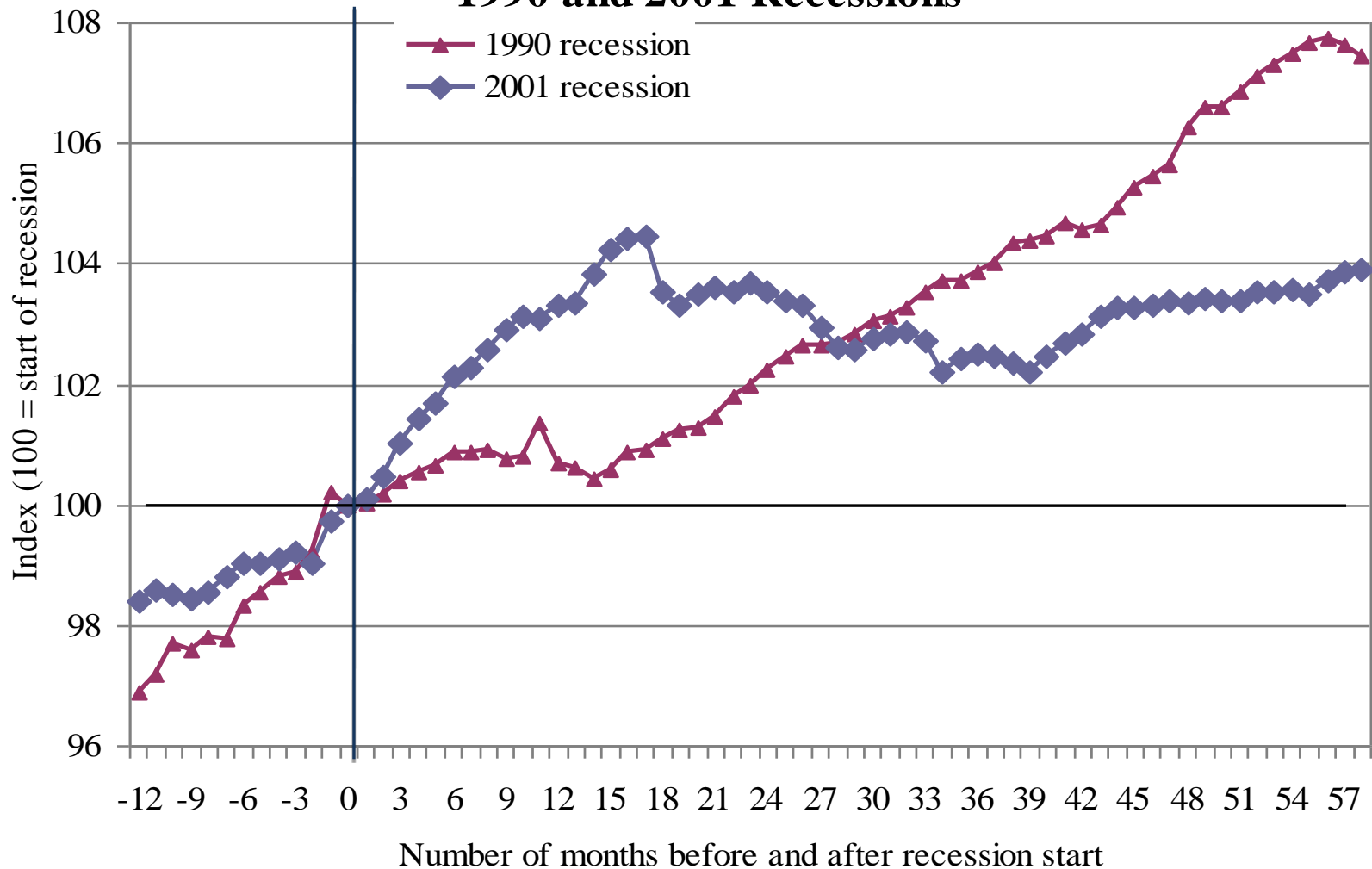
Fiscal crisis and state responses – employment (1)

Monthly State Government Employment in Selected Recessions



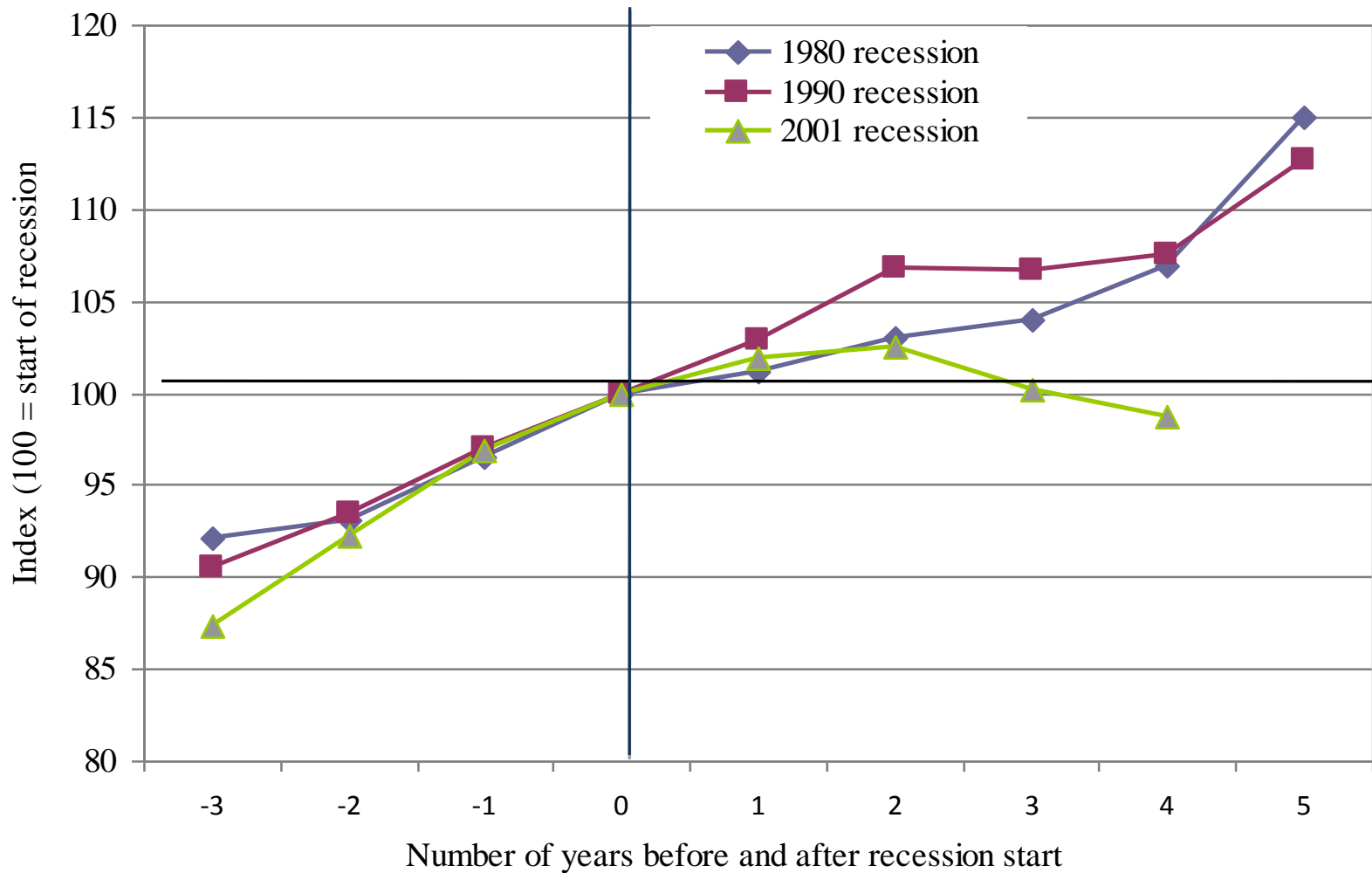
Fiscal crisis and state responses – employment (2)

Monthly State Government Employment in 1990 and 2001 Recessions



States curtailed spending after last recession

Self-Financed General Expenditures



Challenges ahead

- Worst effects so far have been on sales tax
- April-June is critical for income tax in short term
- If economy & revenue worsen as budget negotiations are completed problem will be “undersolved”
- Could trigger another round of midyear cuts, and deeper more-structural solutions in 2009-10