

Recessions and State-Local Finances

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The Economy

Economic conditions

- 52% of surveyed forecasters (N=56) believe US is in recession (WSJ, June 2008)
- Mild recession projected– majority did not forecast a single negative quarter through mid-2009!
- But conditions appear to have deteriorated since then...

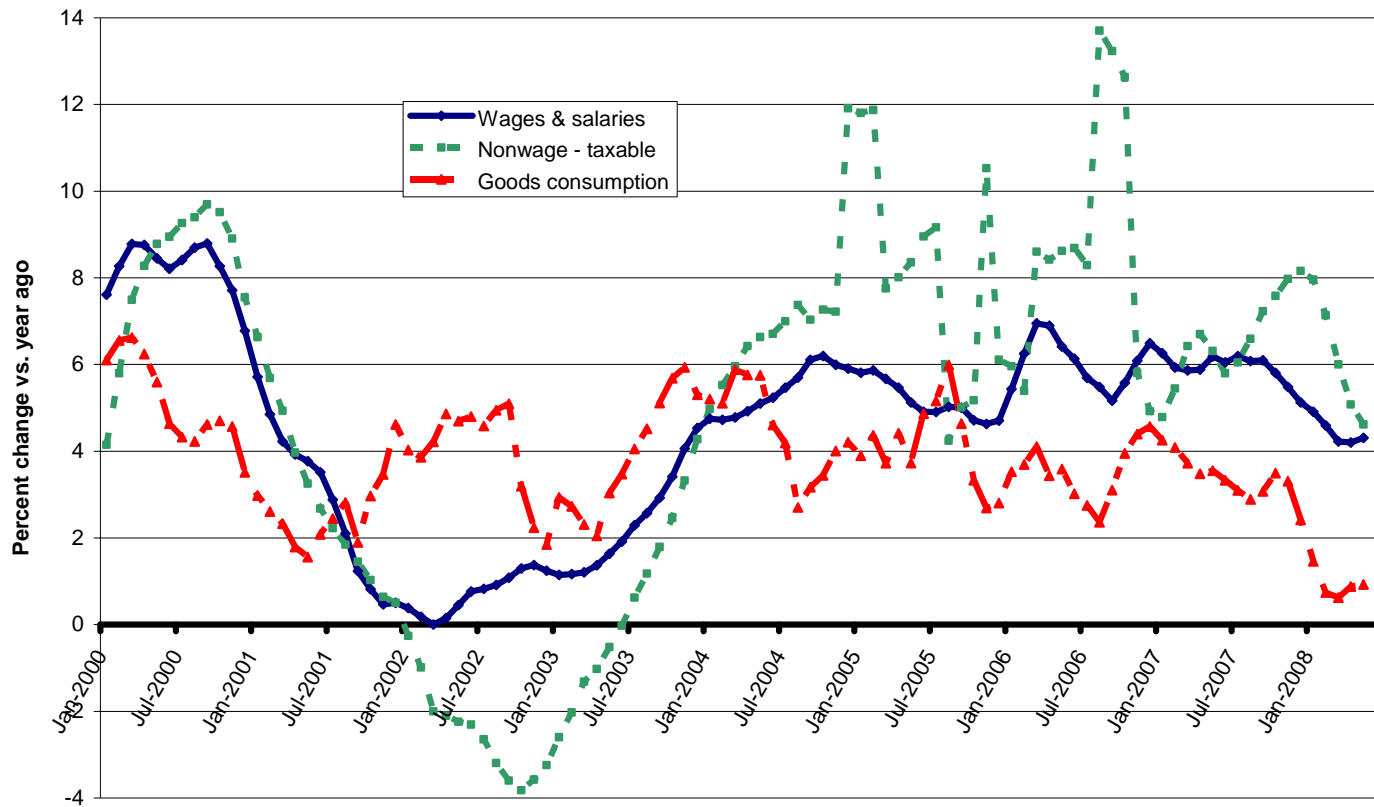
Recent recessions

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 2008)

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.

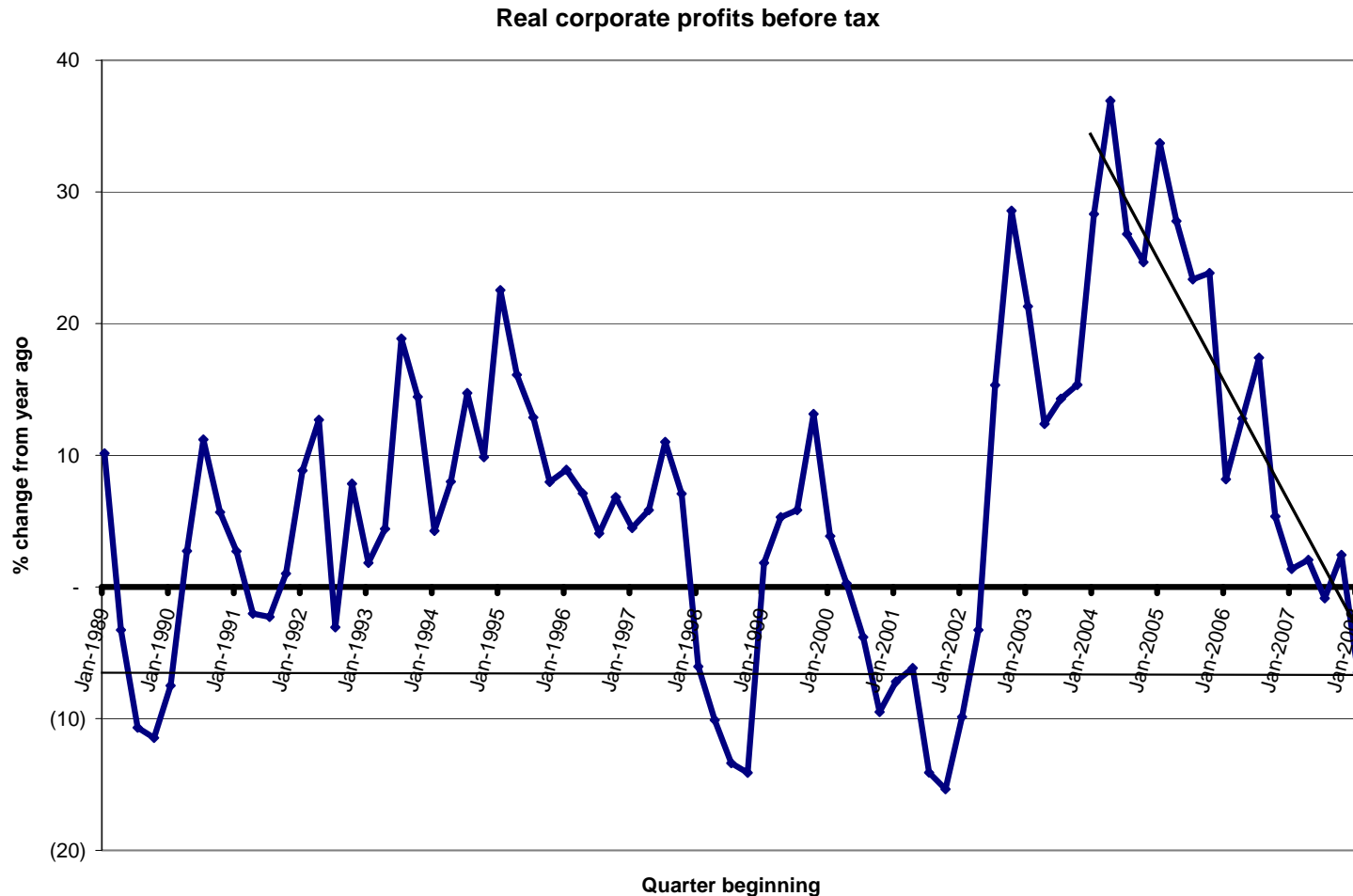
Income and consumption slowing sharply, still stronger than last recession

Percent change in income and consumption vs. year ago
(Adjusted for inflation - 3 month average of percent change)



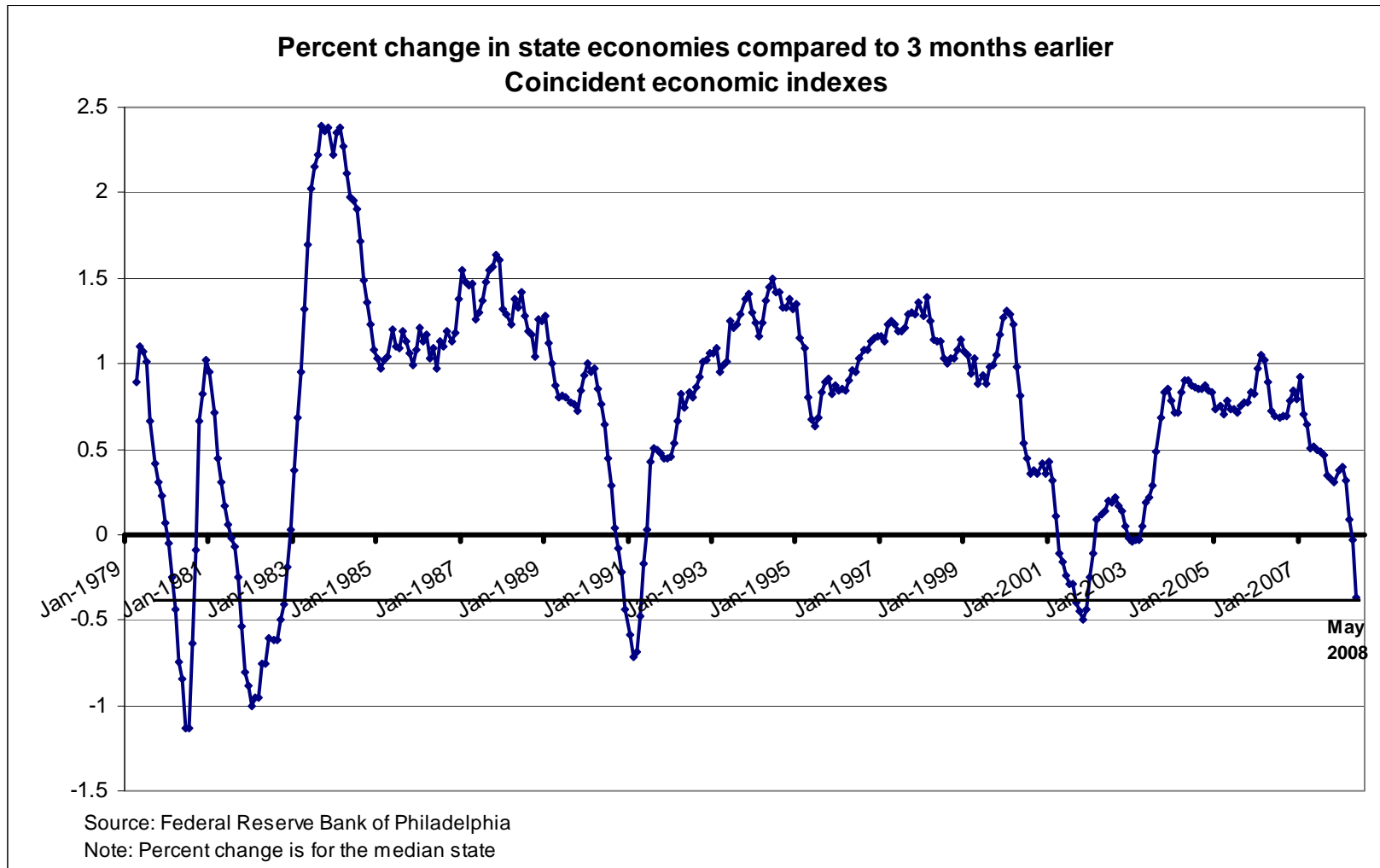
Source: U.S. Bureau of Economic Analysis, National Income and Product Accounts, Tables 2.6, 2.8.4,

Corporate profits: Weakening but not as bad as prior recessions (yet)

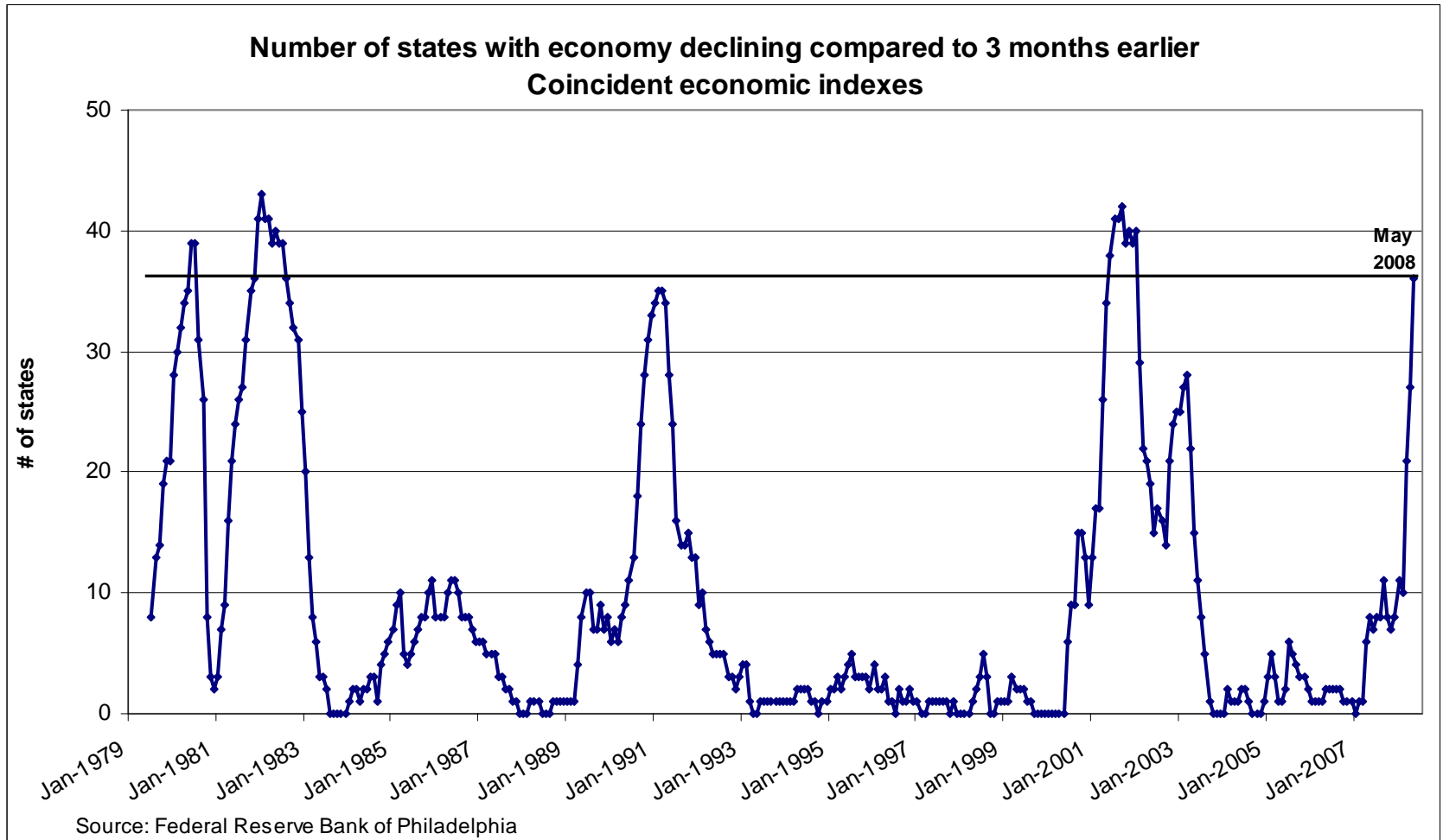


Source: Bureau of Economic Analysis (A053RC1 adjusted by B191RG3)

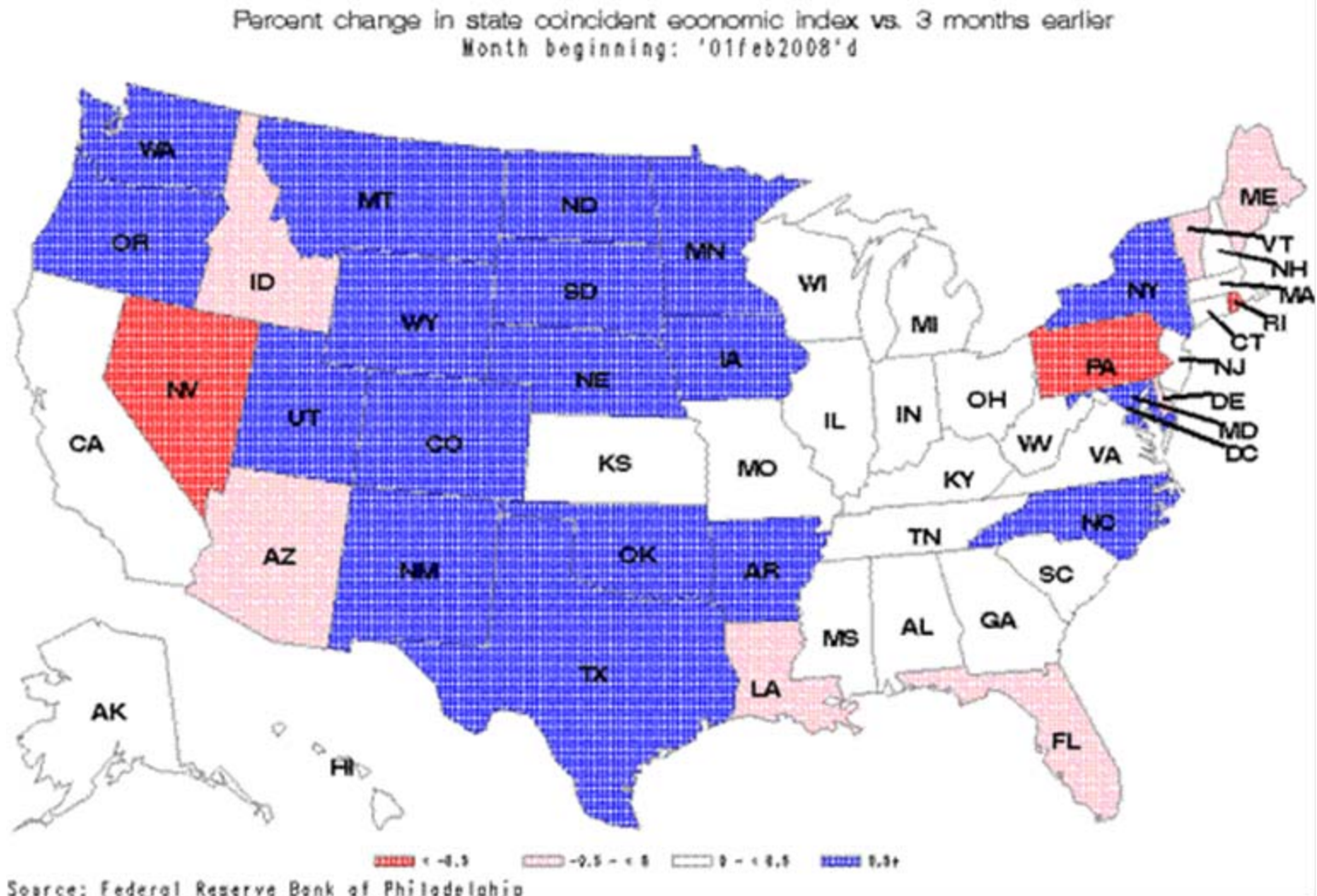
Typical (median) state is declining, but not as significantly as in recent recessions (yet)



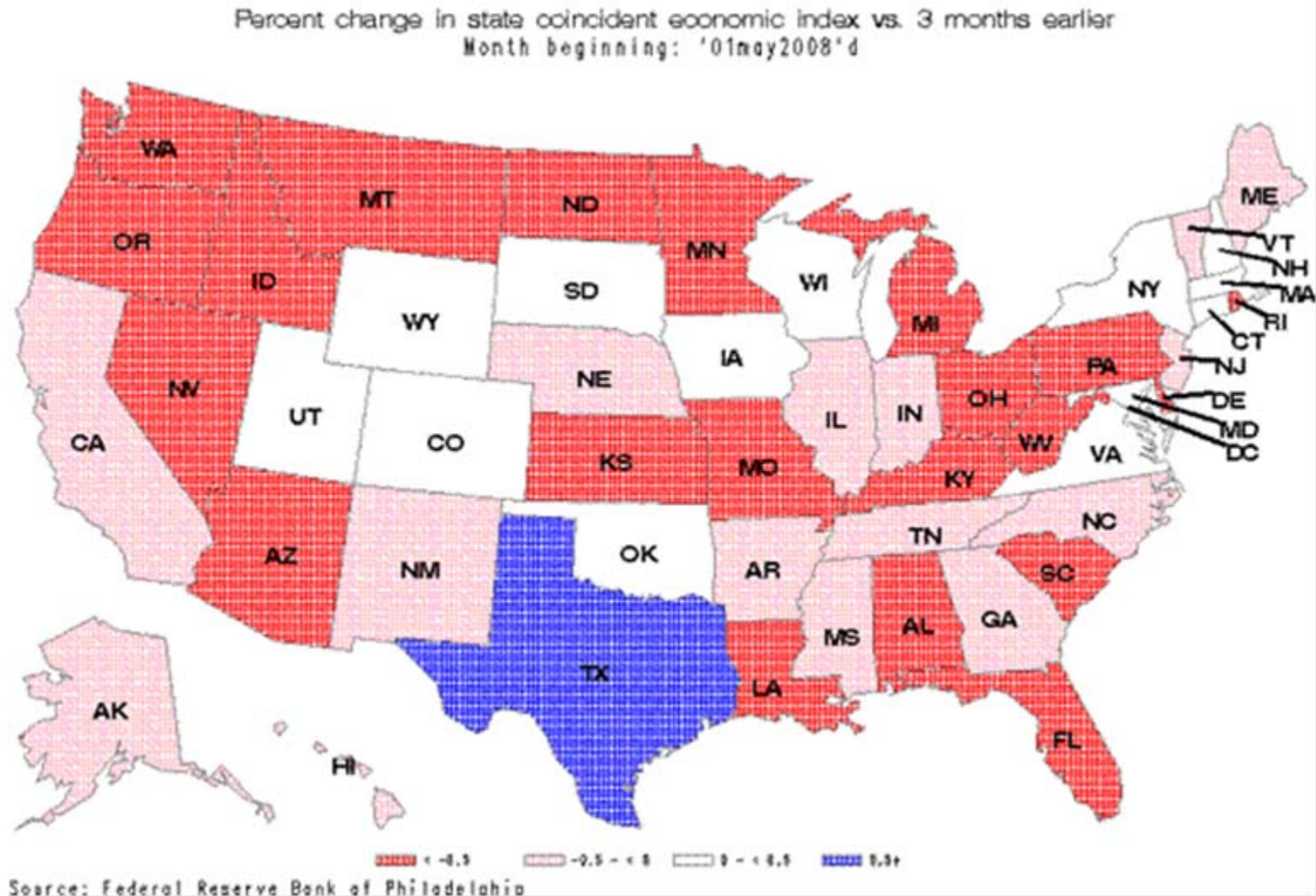
Economic weakness spread rapidly in March, April, May



In February: Only 10 states had declining economies vs. 3 months earlier



By May: 36 states had declining economies vs. 3 months earlier



A majority of CSG-WEST states have seen at least some decline this year

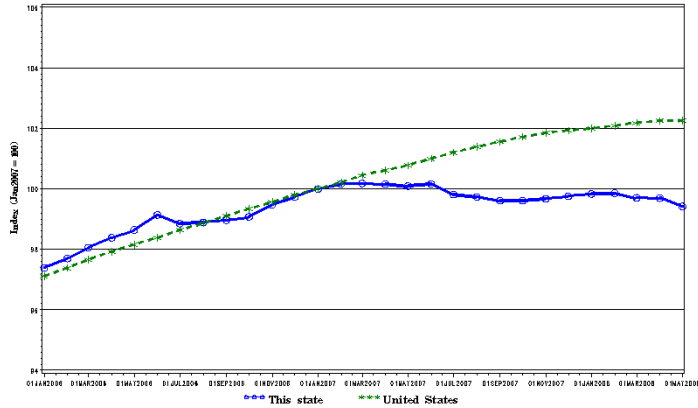
Percentage change in coincident economic index
December 2007 to May 2008

	% change December 2007 to May 2008
Alaska	(0.3)
Arizona	(0.5)
California	0.3
Colorado	0.9
Hawaii	0.2
Idaho	(2.2)
Montana	(1.8)
New Mexico	0.1
Nevada	(1.9)
Oregon	(0.3)
Utah	0.7
Washington	(1.2)
Wyoming	1.3
United States	0.3

Source: Federal Reserve Bank of Philadelphia

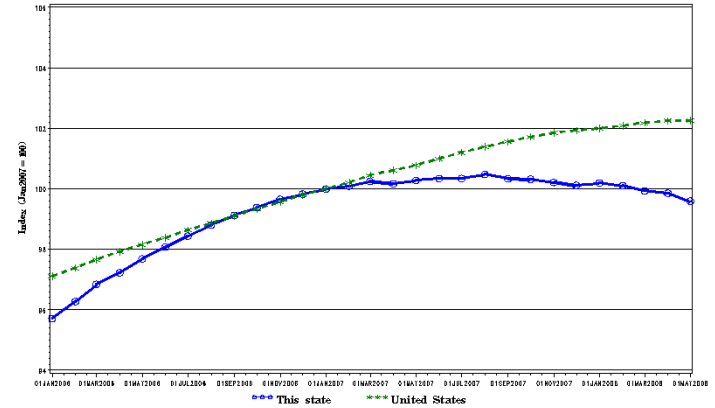
State economic performance vs. US (1)

State economy compared with US (coincident economic index)
stabbr= AK



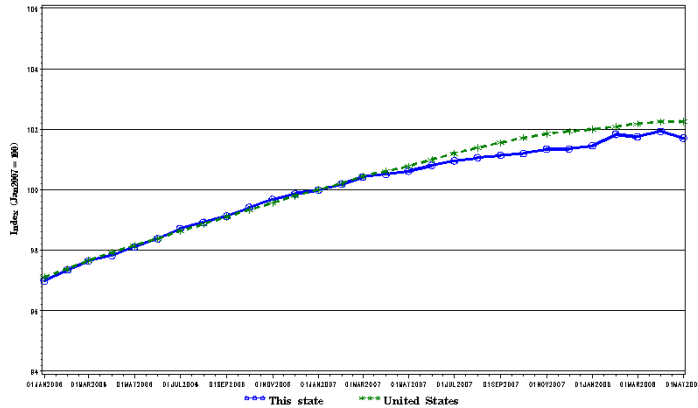
Source: Federal Reserve Bank of Philadelphia

State economy compared with US (coincident economic index)
stabbr= AZ



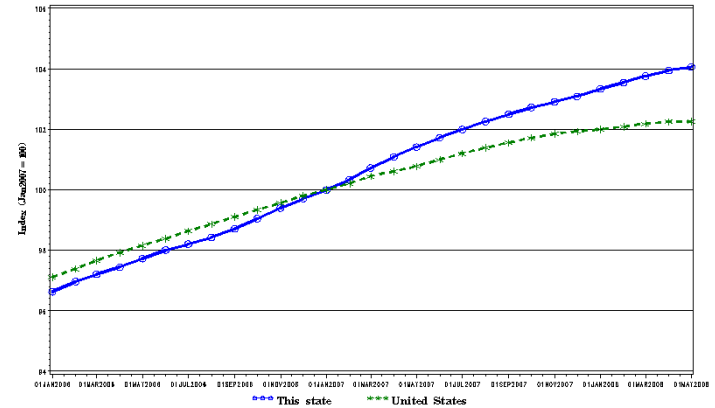
Source: Federal Reserve Bank of Philadelphia

State economy compared with US (coincident economic index)
stabbr= CA



Source: Federal Reserve Bank of Philadelphia

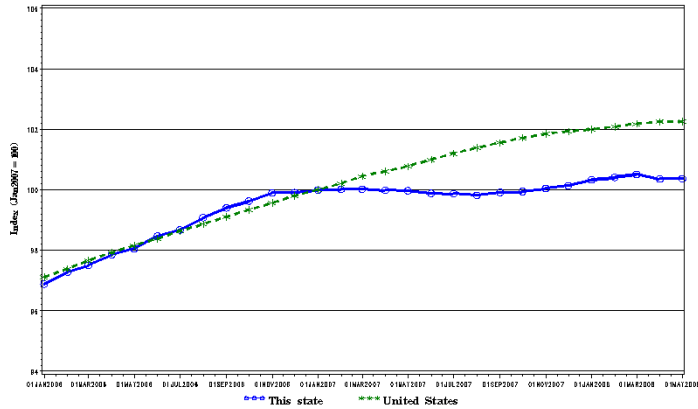
State economy compared with US (coincident economic index)
stabbr= CO



Source: Federal Reserve Bank of Philadelphia

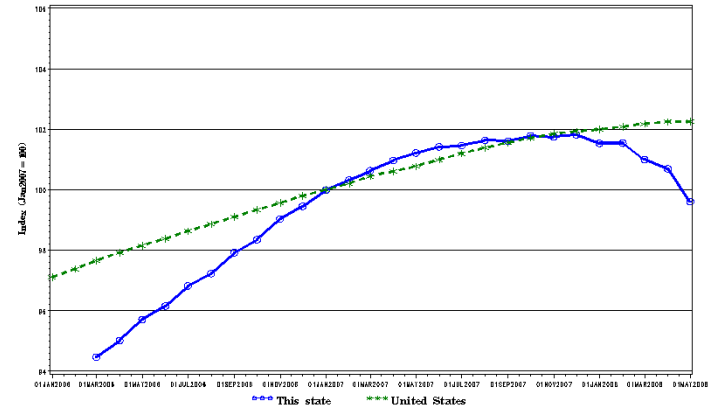
State economic performance vs. US (2)

State economy compared with US (coincident economic index)
stabbr= HI



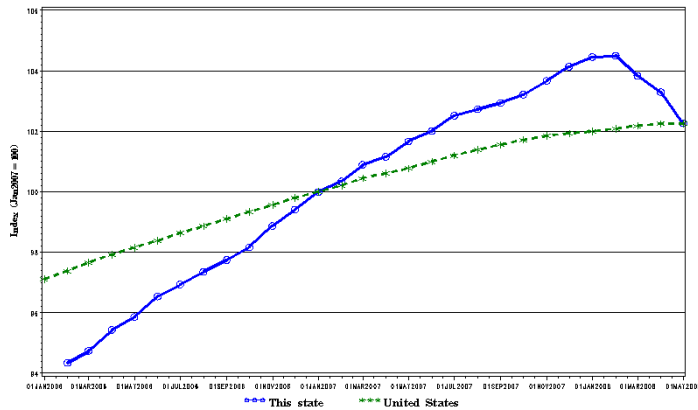
Source: Federal Reserve Bank of Philadelphia

State economy compared with US (coincident economic index)
stabbr= ID



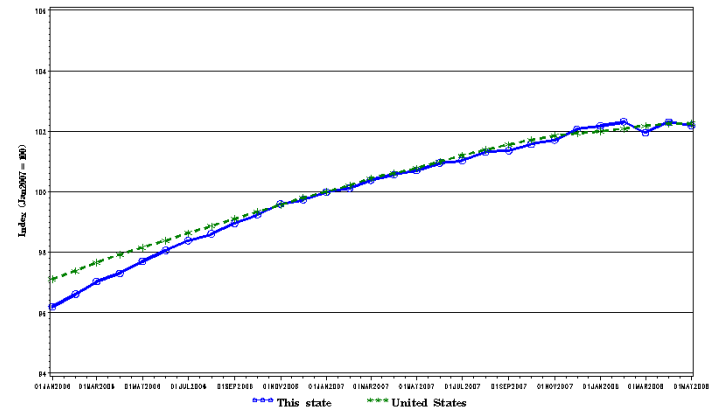
Source: Federal Reserve Bank of Philadelphia

State economy compared with US (coincident economic index)
stabbr= MT



Source: Federal Reserve Bank of Philadelphia

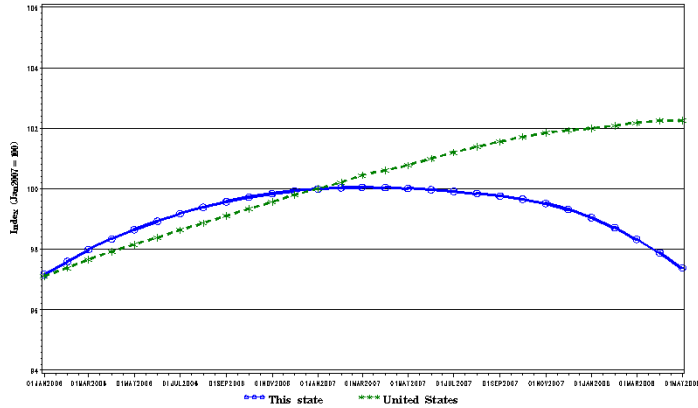
State economy compared with US (coincident economic index)
stabbr= NM



Source: Federal Reserve Bank of Philadelphia

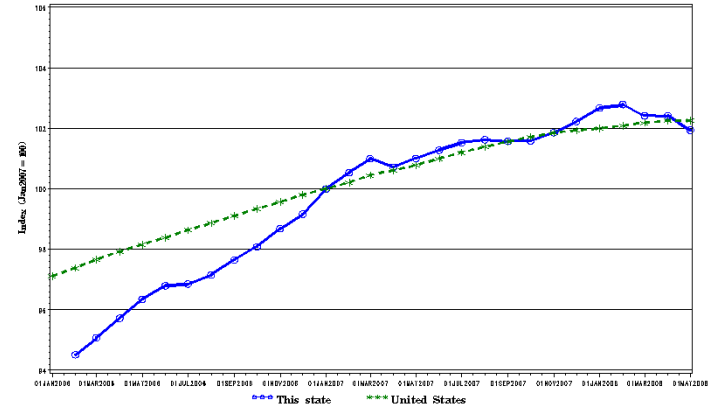
State economic performance vs. US (3)

State economy compared with US (coincident economic index)
stabbr= NV



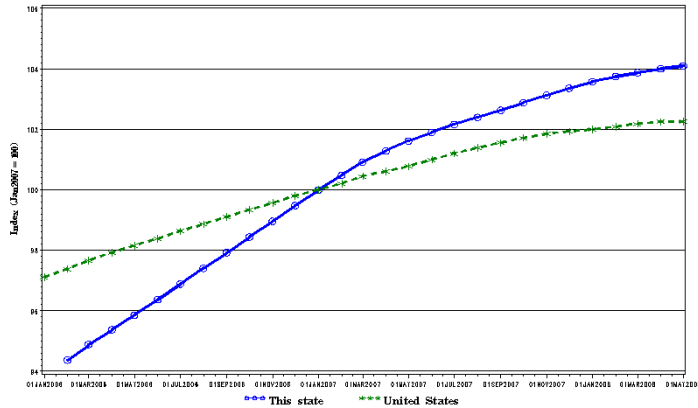
Source: Federal Reserve Bank of Philadelphia

State economy compared with US (coincident economic index)
stabbr= OR



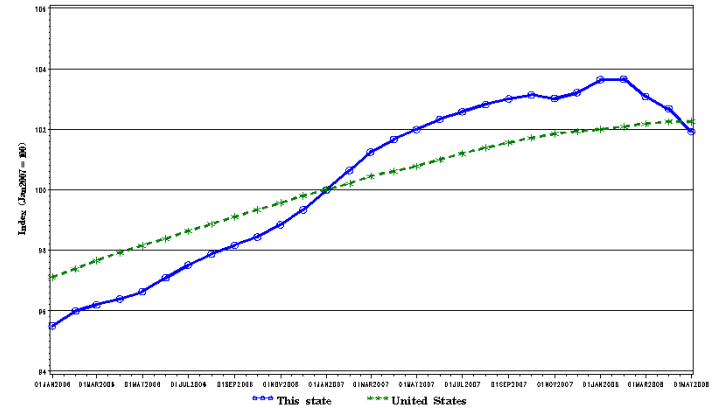
Source: Federal Reserve Bank of Philadelphia

State economy compared with US (coincident economic index)
stabbr= UT



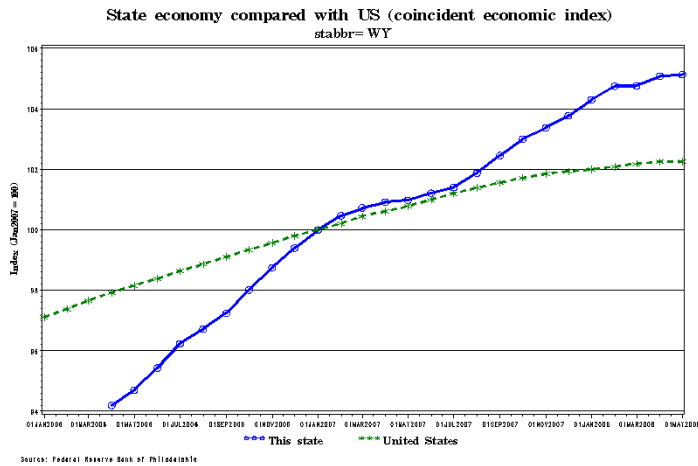
Source: Federal Reserve Bank of Philadelphia

State economy compared with US (coincident economic index)
stabbr= WA



Source: Federal Reserve Bank of Philadelphia

State economic performance vs. US (4)



Varied economies = special risks and possible sources of growth or stability

State industry output as a share of state gross domestic product, 2006

	United States	Alaska	Arizona	California	Colorado	Hawaii	Idaho	Montana	New Mexico	Nevada	Oregon	Utah	Wash ington	Wyoming
All Industries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Private industries	88.1	82.4	88.0	88.9	88.1	77.2	86.1	84.0	81.9	90.3	88.0	86.6	86.0	87.1
Mining	2.0	31.0	1.7	0.8	4.5	0.1	0.8	5.7	13.9	2.3	0.2	3.4	0.1	32.2
Construction plus real estate, rental, and leasing	17.5	11.7	22.8	21.5	19.0	23.3	19.1	17.9	15.1	24.0	17.9	17.2	19.3	13.1
Manufacturing	11.8	2.2	8.1	9.9	6.5	1.7	10.2	4.3	7.1	4.2	19.2	10.9	10.0	3.2
Wholesale trade, retail trade, & transportation	15.2	15.5	16.2	14.9	14.0	14.2	17.1	17.0	12.9	14.6	15.0	16.0	16.2	15.0
Information, finance, insurance, professional/technical, management, administration	24.8	10.3	23.2	26.0	29.0	16.0	19.9	15.5	16.7	20.0	18.1	24.2	24.4	8.2
Education, health, arts, other services	11.0	7.6	10.4	10.1	10.0	11.0	10.3	13.1	9.7	9.4	11.1	10.4	10.4	6.3
Accommodation and food services	2.7	2.4	3.2	2.7	3.0	8.6	2.6	3.3	2.9	14.0	2.5	2.5	2.7	3.4
All other	3.0	1.7	2.4	3.0	2.1	2.3	6.2	7.1	3.5	1.8	4.0	1.9	3.0	5.6
Government	11.9	17.6	12.0	11.1	11.9	22.8	13.9	16.0	18.1	9.7	12.0	13.4	14.0	12.9

State minus United States (positive --> greater concentration in state, negative (parentheses) --> lesser concentration in state)

	Alaska	Arizona	California	Colorado	Hawaii	Idaho	Montana	New Mexico	Nevada	Oregon	Utah	Wash ington	Wyoming
Private industries	(5.7)	(0.0)	0.8	0.0	(10.8)	(1.9)	(4.1)	(6.1)	2.2	(0.1)	(1.5)	(2.1)	(1.0)
Mining	29.0	(0.3)	(1.2)	2.5	(1.9)	(1.2)	3.7	11.9	0.3	(1.8)	1.4	(1.9)	30.2
Construction plus real estate, rental, and leasing	(5.8)	5.3	4.0	1.5	5.8	1.6	0.4	(2.3)	6.6	0.5	(0.3)	1.8	(4.4)
Manufacturing	(9.7)	(3.7)	(2.0)	(5.3)	(10.1)	(1.6)	(7.5)	(4.7)	(7.6)	7.4	(0.9)	(1.8)	(8.6)
Wholesale trade, retail trade, & transportation	0.3	1.0	(0.3)	(1.2)	(1.0)	1.9	1.8	(2.4)	(0.6)	(0.2)	0.8	0.9	(0.2)
Information, finance, insurance, professional/technical, management, administration	(14.5)	(1.6)	1.2	4.2	(8.8)	(4.9)	(9.3)	(8.1)	(4.8)	(6.7)	(0.6)	(0.4)	(16.6)
Education, health, arts, other services	(3.4)	(0.6)	(0.9)	(1.1)	(0.0)	(0.8)	2.1	(1.3)	(1.7)	0.0	(0.6)	(0.7)	(4.7)
Accommodation and food services	(0.3)	0.5	(0.0)	0.3	5.9	(0.1)	0.6	0.2	11.3	(0.2)	(0.2)	(0.0)	0.7
All other	(1.3)	(0.6)	(0.0)	(0.9)	(0.7)	3.2	4.1	0.5	(1.2)	1.0	(1.1)	(0.1)	2.6
Government	5.7	0.0	(0.8)	(0.0)	10.8	1.9	4.1	6.1	(2.2)	0.1	1.5	2.1	1.0

Source: Bureau of Economic Analysis, Gross domestic product by state

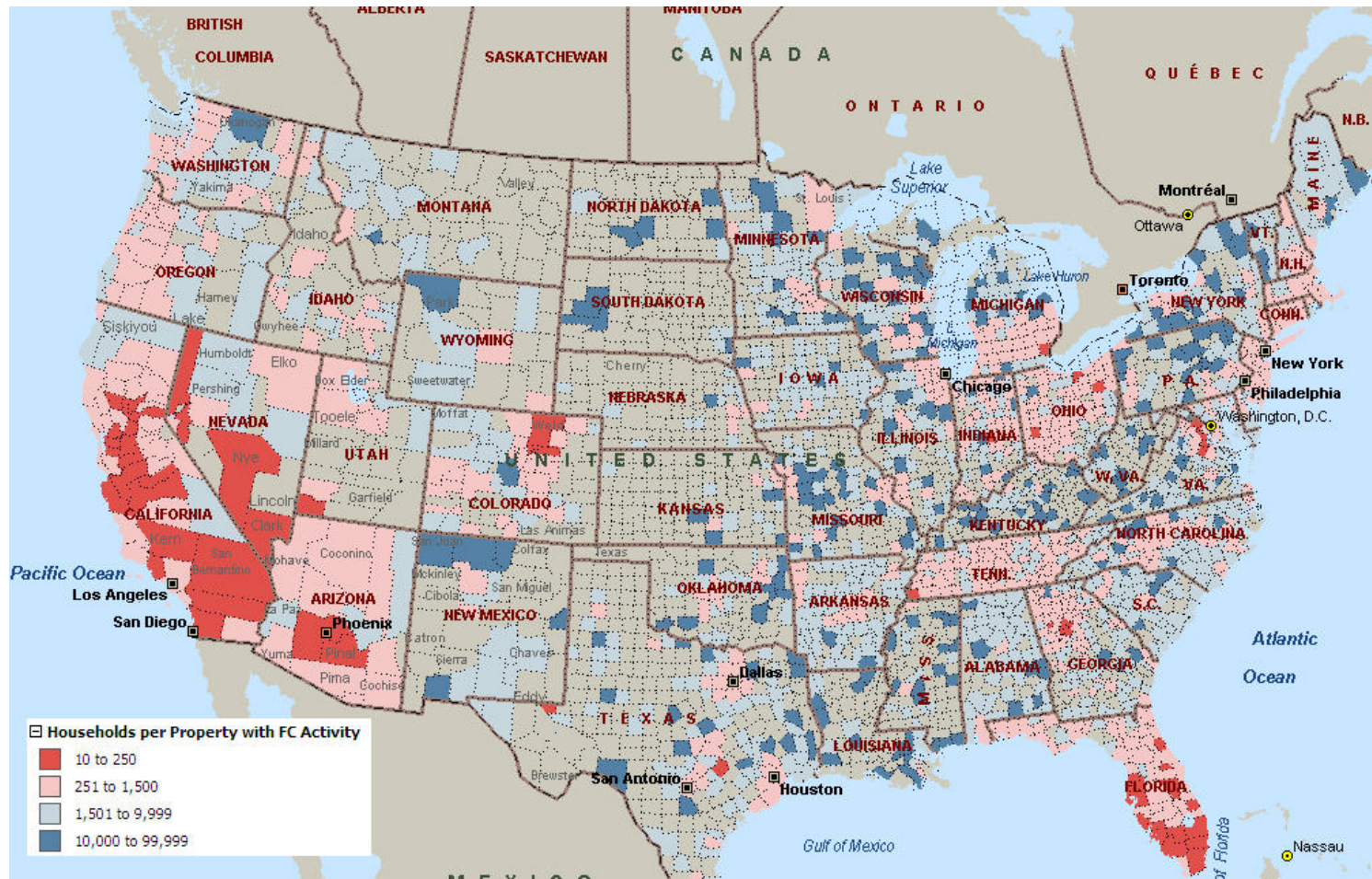
Housing prices have slowed in all Western states; Significant declines in CA, NV, AZ

Year-over-year change in housing prices

	Percentage change		Acceleration or (slowing)
	2006q3 vs. year earlier	2008q1 vs. year earlier	
Alaska	10.2	1.3	(8.9)
Arizona	15.8	(5.5)	(21.3)
California	9.3	(10.6)	(19.9)
Colorado	2.7	2.3	(0.4)
Hawaii	13.6	(0.3)	(13.9)
Idaho	16.6	2.6	(14.0)
Montana	12.4	4.9	(7.5)
New Mexico	13.5	3.4	(10.1)
Nevada	7.7	(10.3)	(18.0)
Oregon	16.4	2.2	(14.2)
Utah	17.0	5.6	(11.5)
Washington	15.9	2.9	(13.0)
Wyoming	13.3	6.3	(7.0)
United States	6.7	(0.0)	(6.7)

Source: Office of Federal Housing Enterprise Oversight

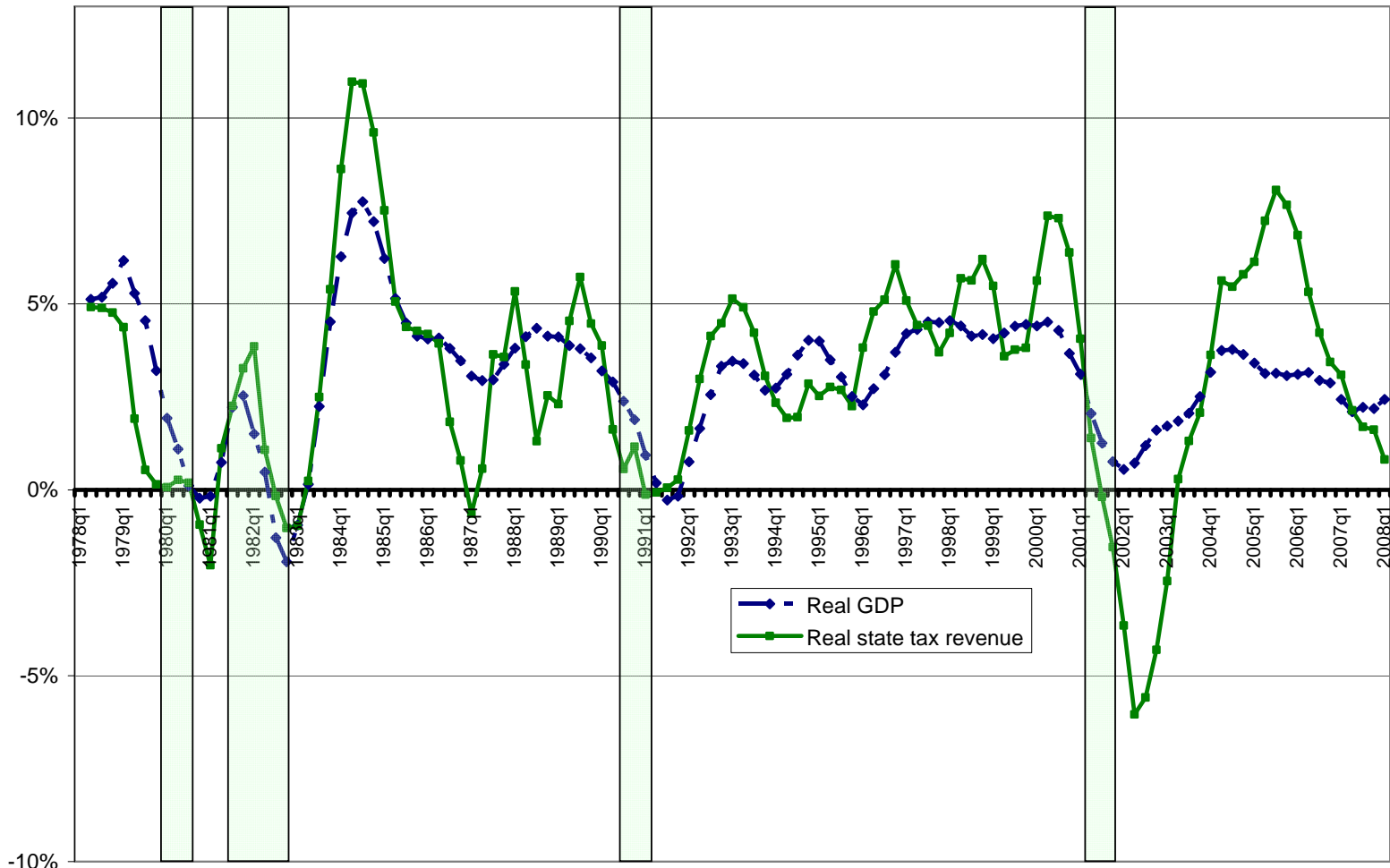
Foreclosure activity: Hard to measure, but several Western states hit hard



Tax Revenue

State taxes and recessions – a long view

Percent change in real state government taxes and real GDP vs. year ago



Sources: Census Bureau: Quarterly tax collections; Bureau of Economic Analysis: real GDP

Notes: (1) percentage changes averaged over 4 quarters; (2) No legislative adjustments; (3) Recession periods are shaded

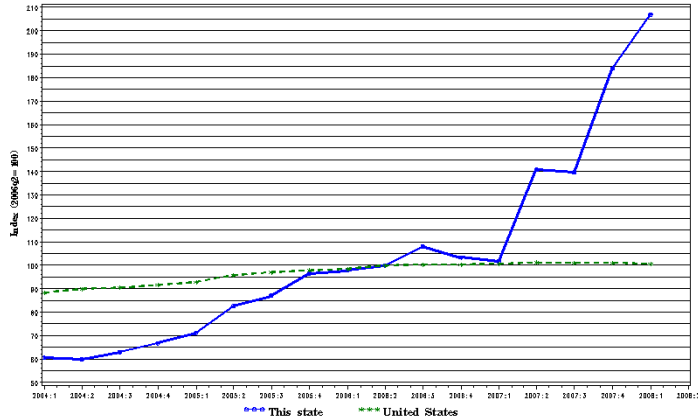
Recent tax collections

- January-March
 - State tax collections slowed to +1.7% growth (Rockefeller Institute)
 - Driven by 0.04% decline in sales tax (nominal), first time in 6 years; Income tax +4.4%, corporate -5.1%
 - Sales tax declines in 23 states – 9 in the southeast; in the West, AZ, CA, CO, ID, NV, UT declined
 - Income tax withholding (current economy) up 4%; declines in 6 states, including AZ, ID
- April-June
 - Early indications are that 2007 tax returns did pretty well -- ++ above estimates in many states (some is processing-related)
 - Estimated payments on 2008 income up sharply as well
 - Signals from broader current economy less clear; Collections weak in non-income-tax states
- Making sense of it
 - Last year's economy is doing well
 - This year's economy (sales tax, withholding) not so well – especially sales tax
 - For nation as a whole, tax weakness has been mild so far – but severe in selected states, especially those with significant housing declines

State tax collections since 2000 (1)

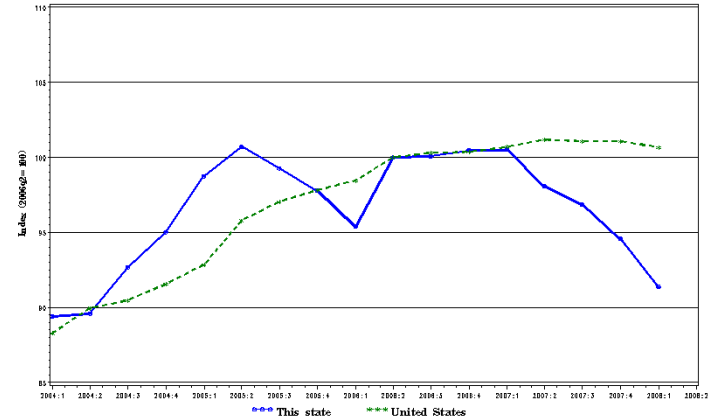
(Caution: No adjustments for legislative changes)

Real taxes per capita (4-quarter average) compared with US
stabbr= AK

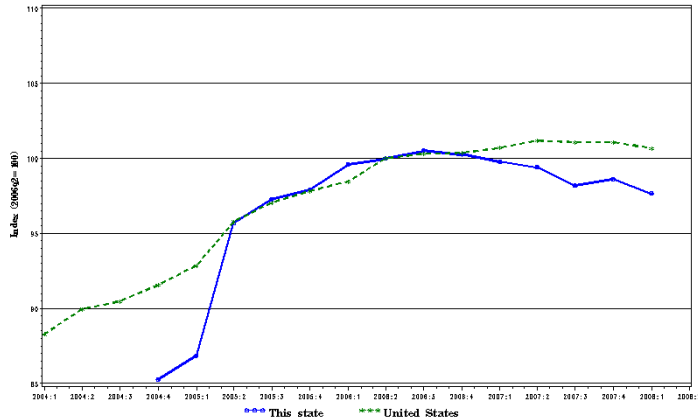


Caution: AK is on different scale from other graphs

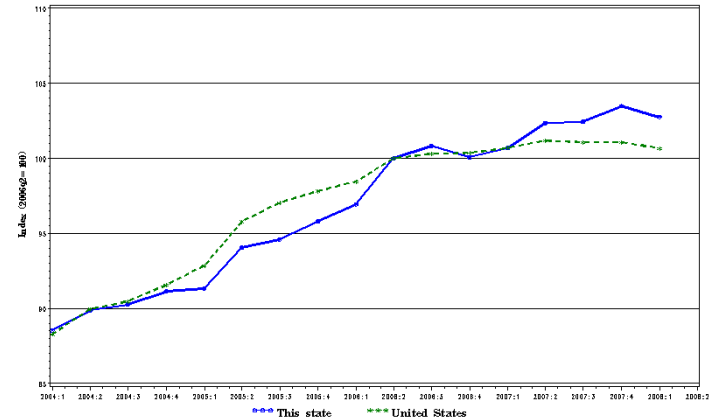
Real taxes per capita (4-quarter average) compared with US
stabbr= AZ



Real taxes per capita (4-quarter average) compared with US
stabbr= CA



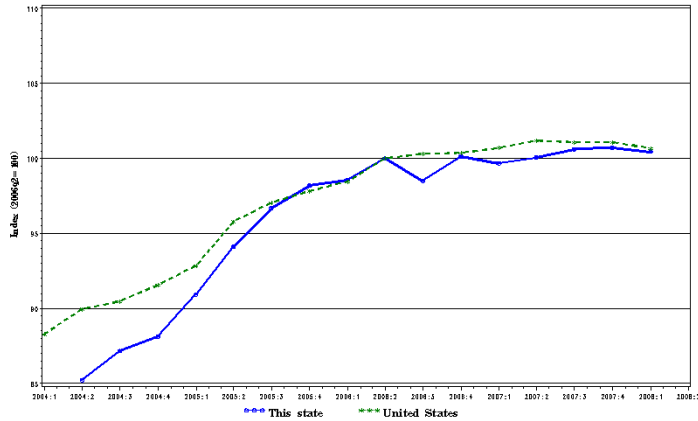
Real taxes per capita (4-quarter average) compared with US
stabbr= CO



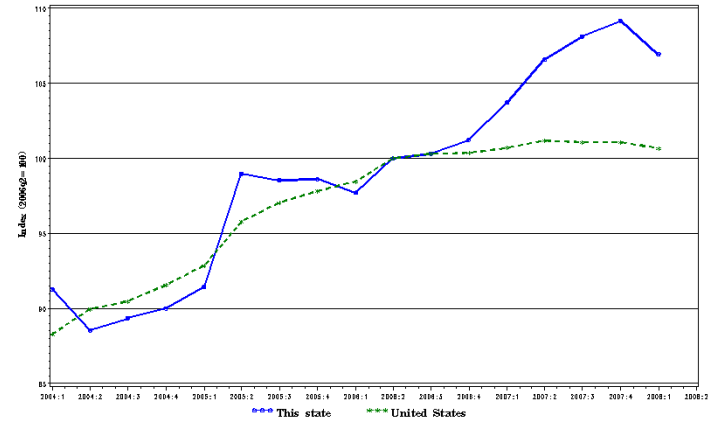
State tax collections since 2000 (2)

(Caution: No adjustments for legislative changes)

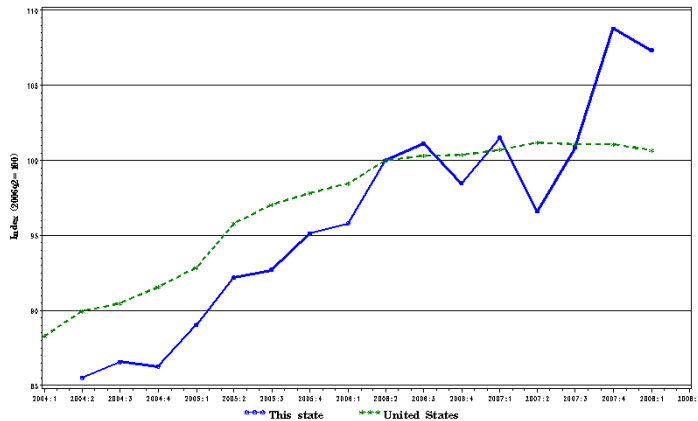
Real taxes per capita (4-quarter average) compared with US
stabbr= HI



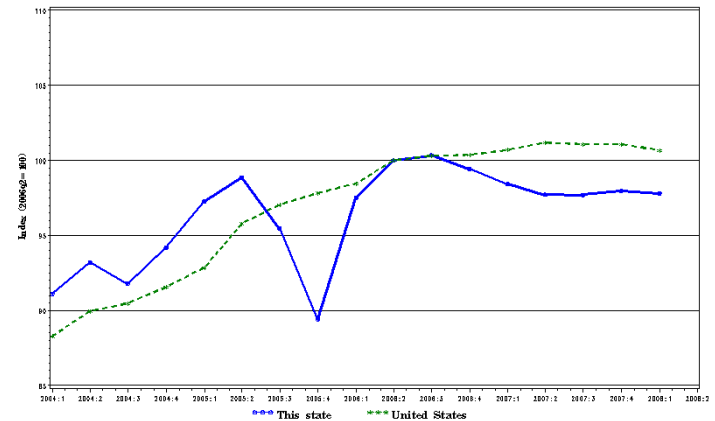
Real taxes per capita (4-quarter average) compared with US
stabbr= ID



Real taxes per capita (4-quarter average) compared with US
stabbr= MT



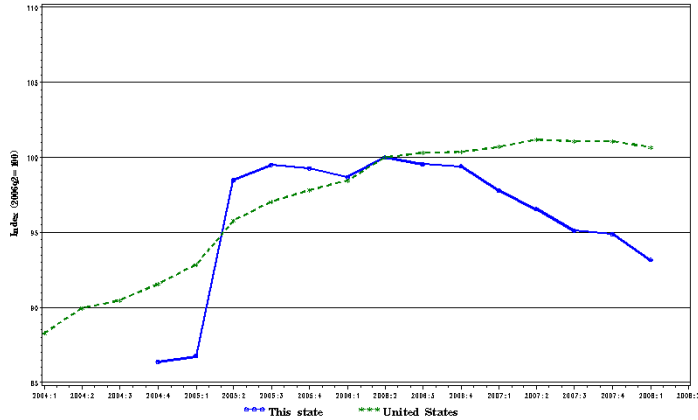
Real taxes per capita (4-quarter average) compared with US
stabbr= NM



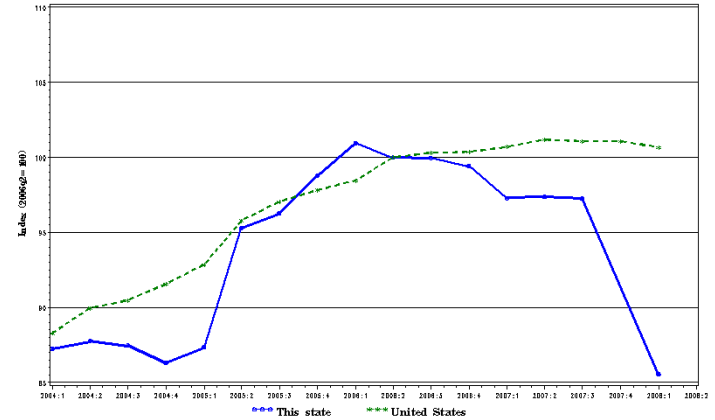
State tax collections since 2000 (3)

(Caution: No adjustments for legislative changes)

Real taxes per capita (4-quarter average) compared with US
stabbr= NV

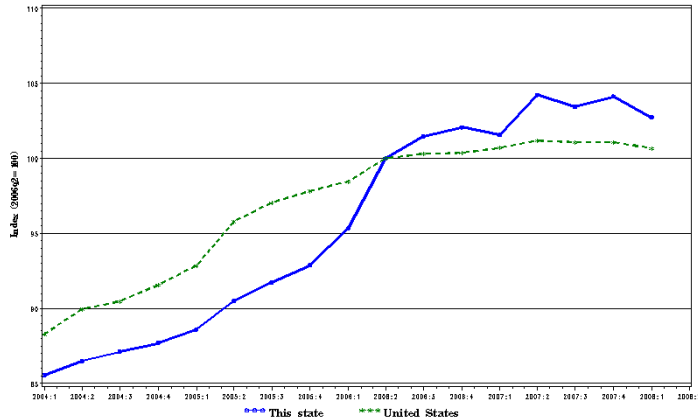


Real taxes per capita (4-quarter average) compared with US
stabbr= OR

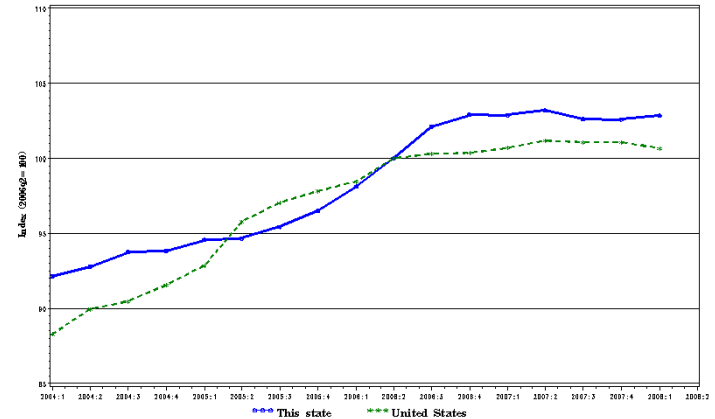


OR decline may reflect anomalies

Real taxes per capita (4-quarter average) compared with US
stabbr= UT

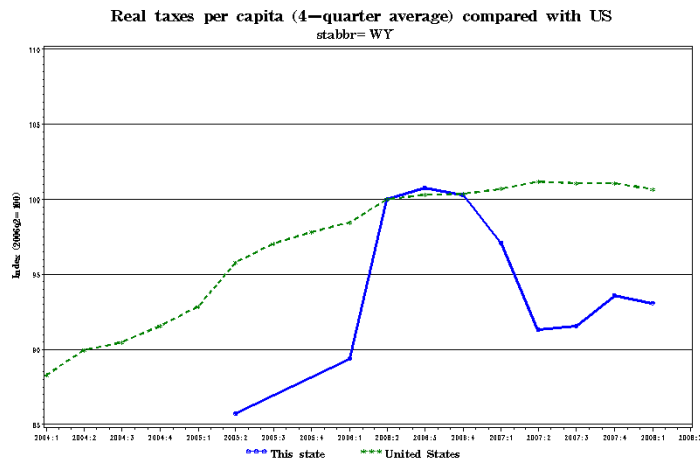


Real taxes per capita (4-quarter average) compared with US
stabbr= WA



State tax collections since 2000 (4)

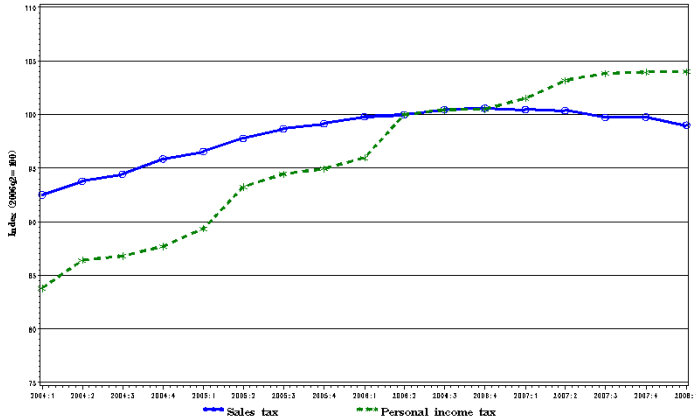
(Caution: No adjustments for legislative changes)



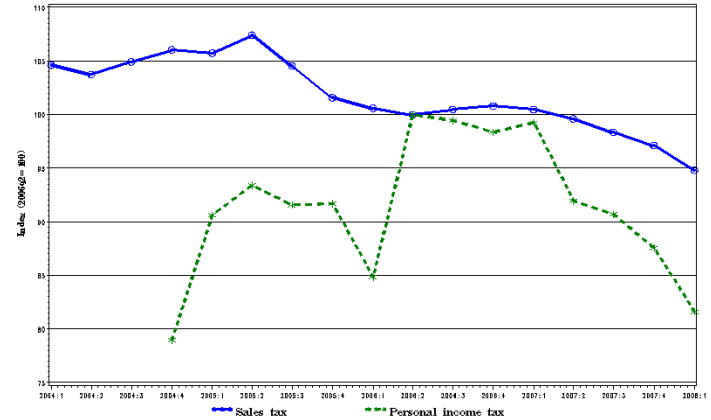
Which is weaker, income or sales tax? It depends. (1)

(Caution: No adjustments for legislative changes)

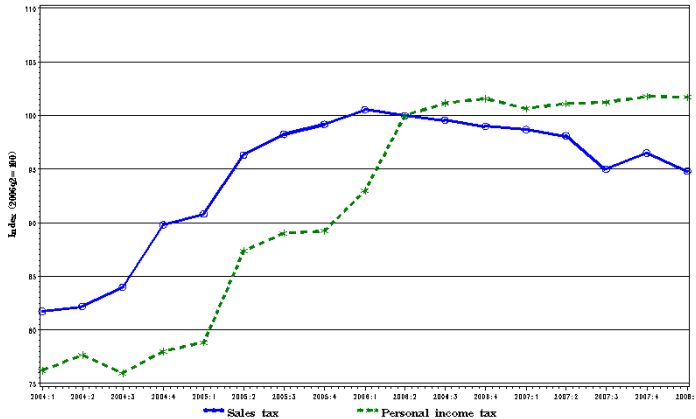
Real taxes per capita (4-quarter average)
stabbr= US



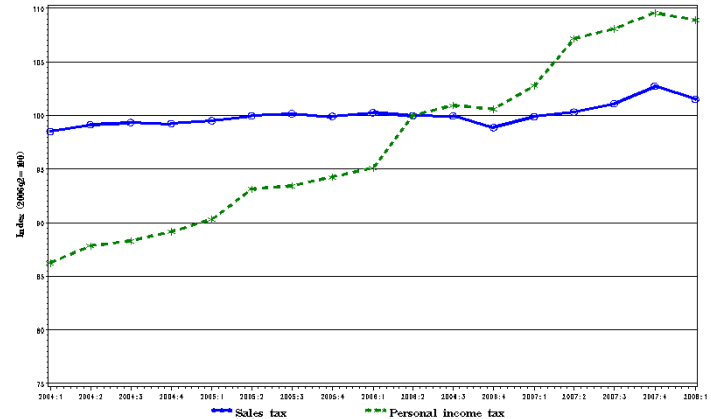
Real taxes per capita (4-quarter average)
stabbr= AZ



Real taxes per capita (4-quarter average)
stabbr= CA



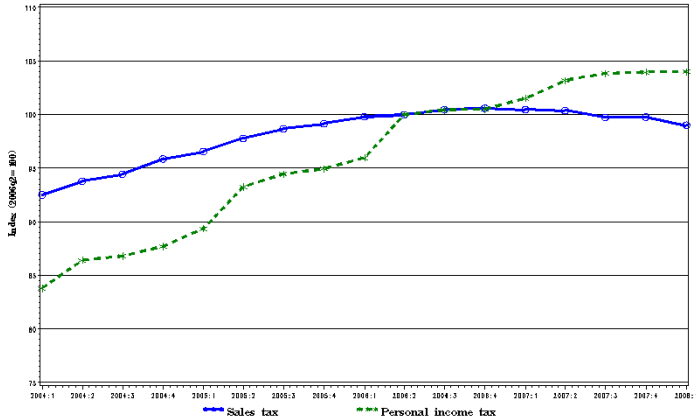
Real taxes per capita (4-quarter average)
stabbr= CO



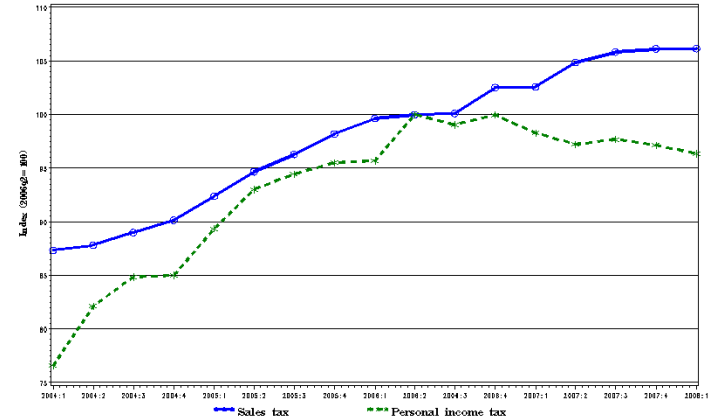
Which is weaker, income or sales tax? It depends. (2)

(Caution: No adjustments for legislative changes)

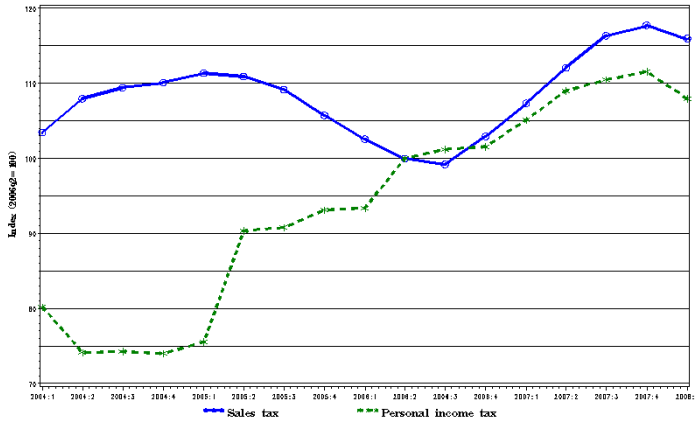
Real taxes per capita (4-quarter average)
stabbr= US



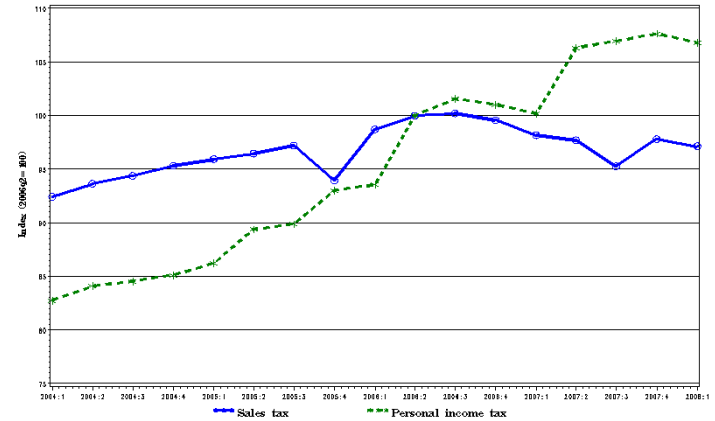
Real taxes per capita (4-quarter average)
stabbr= HI



Real taxes per capita (4-quarter average)
stabbr= ID



Real taxes per capita (4-quarter average)
stabbr= UT

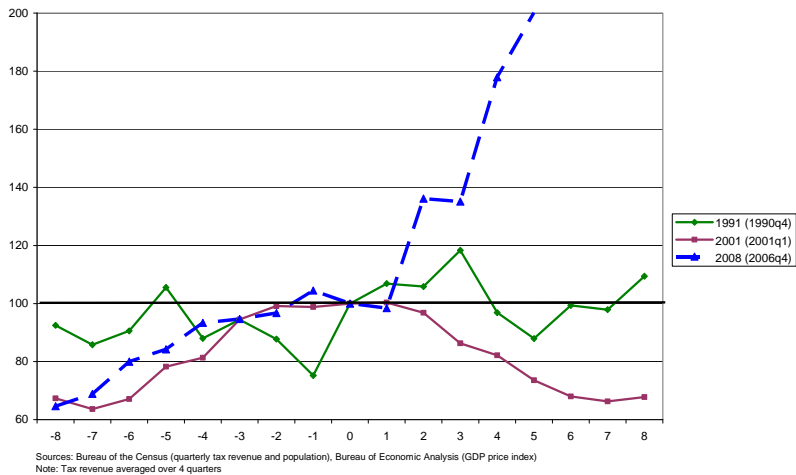


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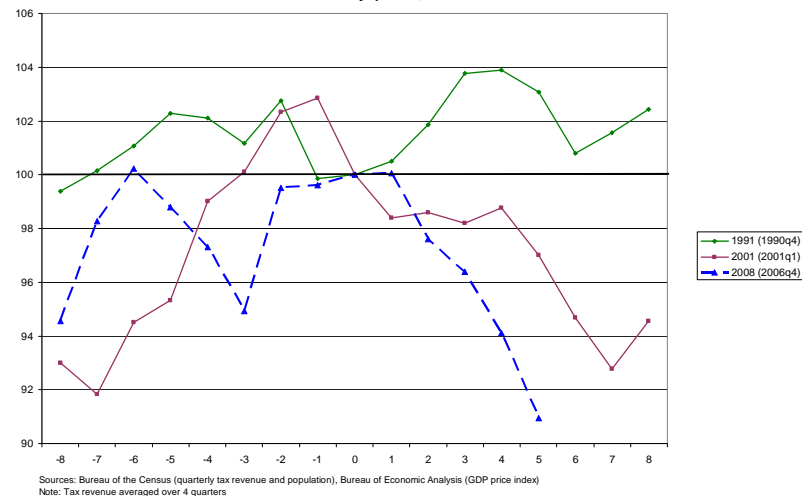
How bad is this compared with past recessions? (1)

(Cautions: Different scales; No adjustments for legislative changes)

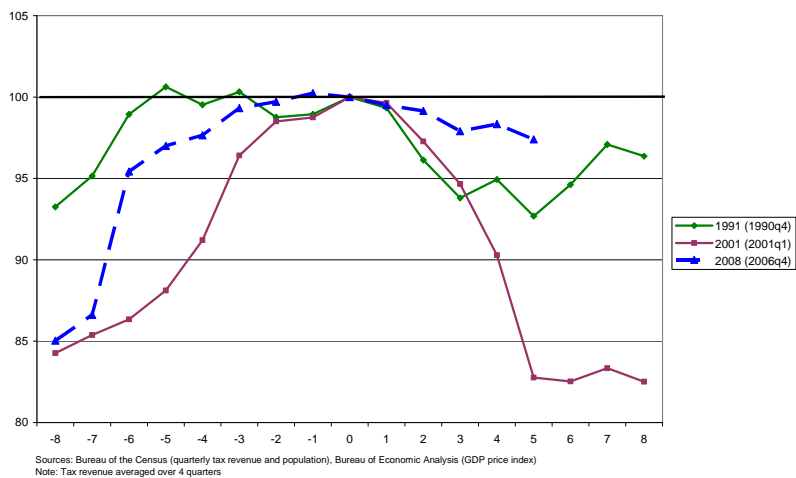
Alaska: Real state government taxes per capita
- Indexed to key quarter, recent recessions -



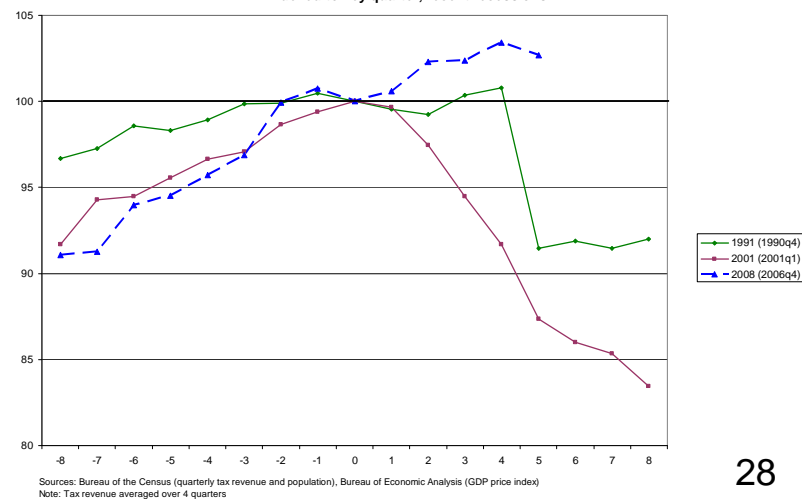
Arizona: Real state government taxes per capita
- Indexed to key quarter, recent recessions -



California: Real state government taxes per capita
- Indexed to key quarter, recent recessions -



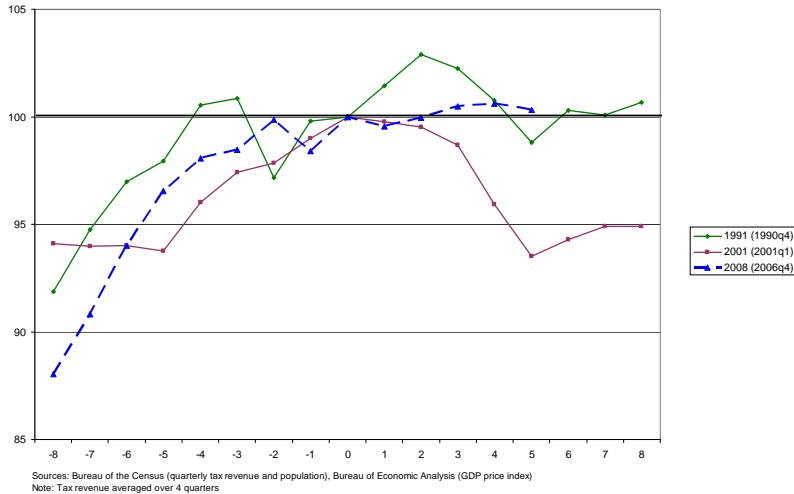
Colorado: Real state government taxes per capita
- Indexed to key quarter, recent recessions -



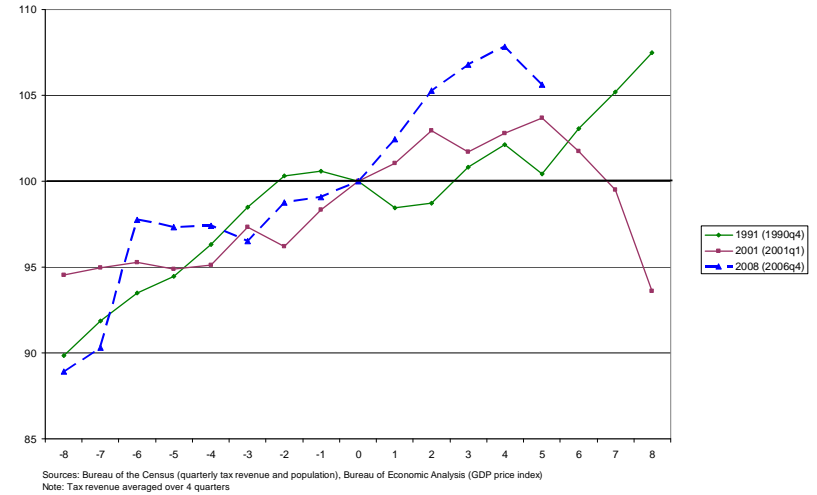
How bad is this compared with past recessions? (2)

(Cautions: Different scales; No adjustments for legislative changes)

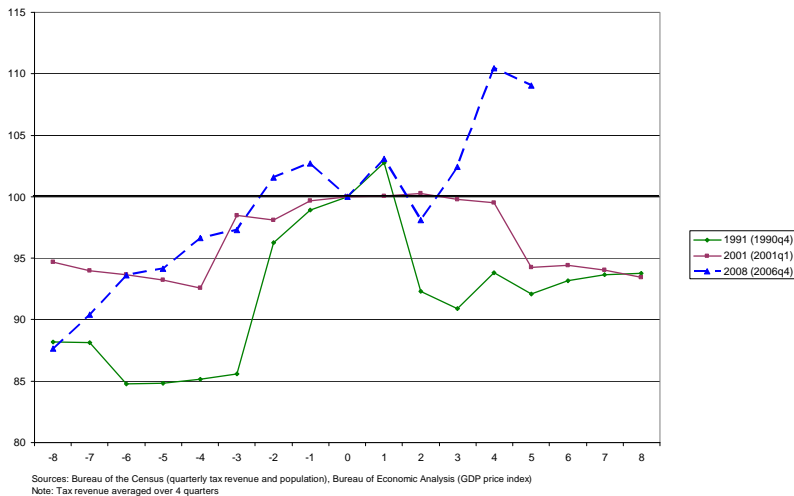
Hawaii: Real state government taxes per capita
- Indexed to key quarter, recent recessions -



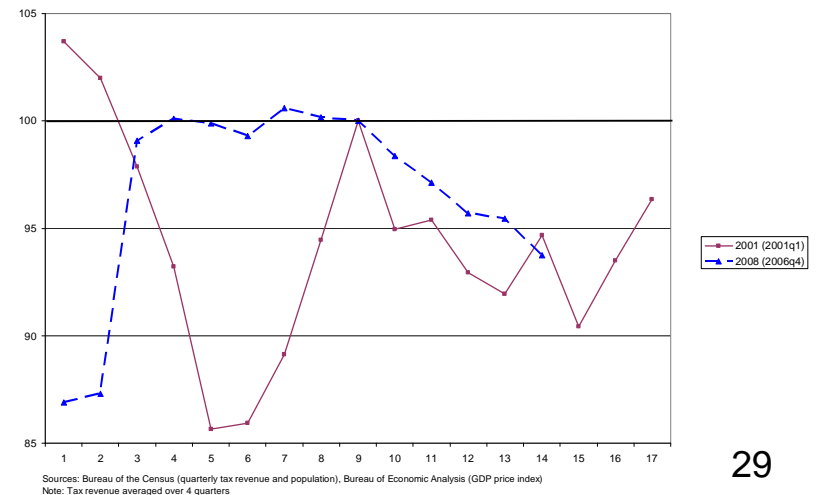
Idaho: Real state government taxes per capita
- Indexed to key quarter, recent recessions -



Montana: Real state government taxes per capita
- Indexed to key quarter, recent recessions -

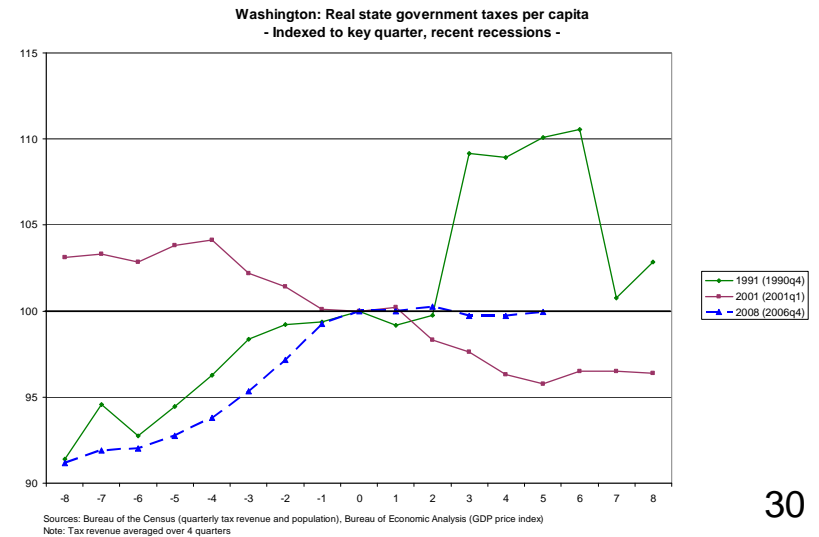
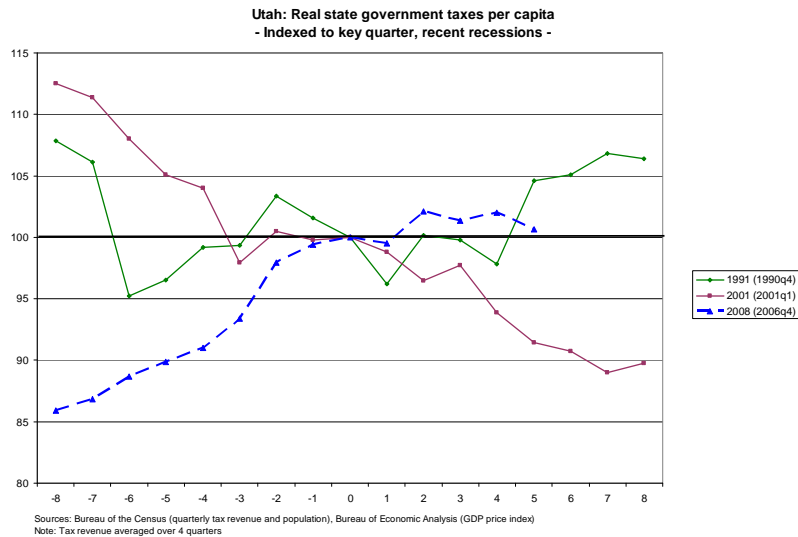
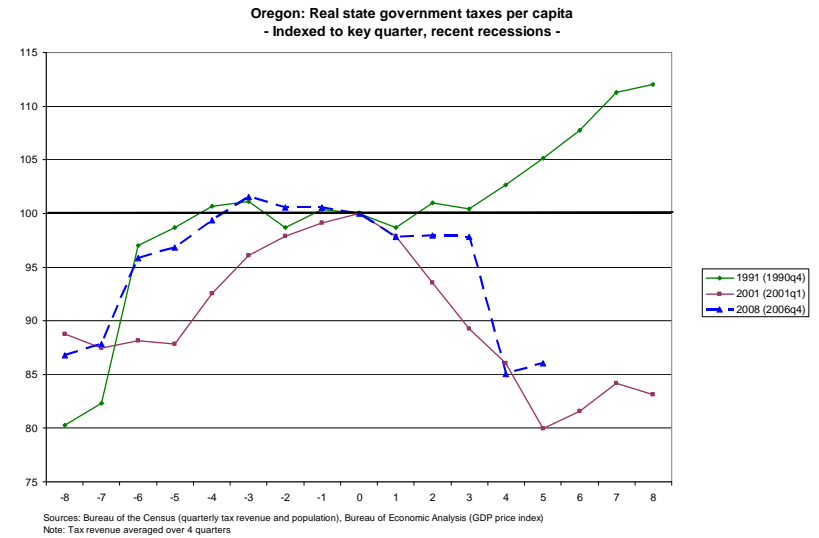
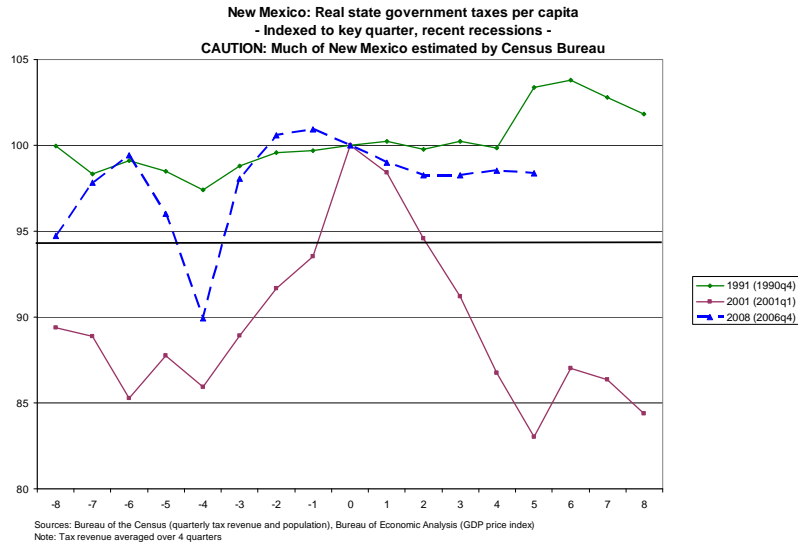


Nevada: Real state government taxes per capita
- Indexed to key quarter, recent recessions -



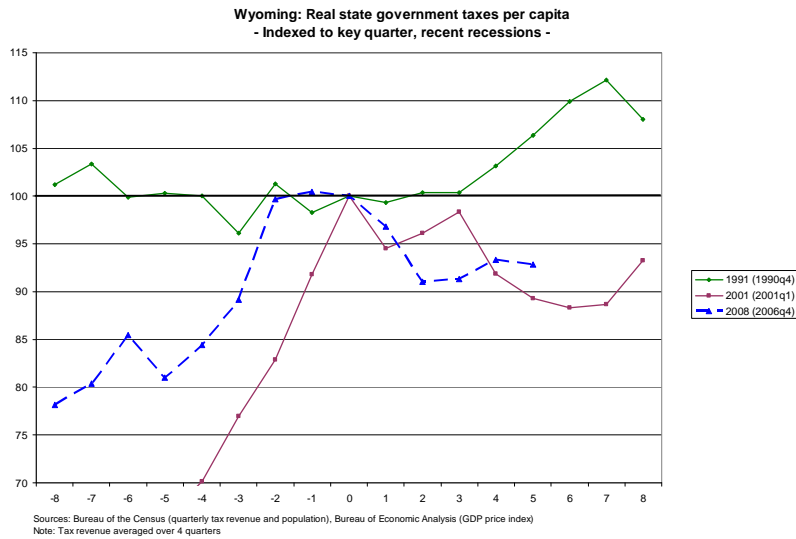
How bad is this compared with past recessions? (3)

(Cautions: Different scales; No adjustments for legislative changes)



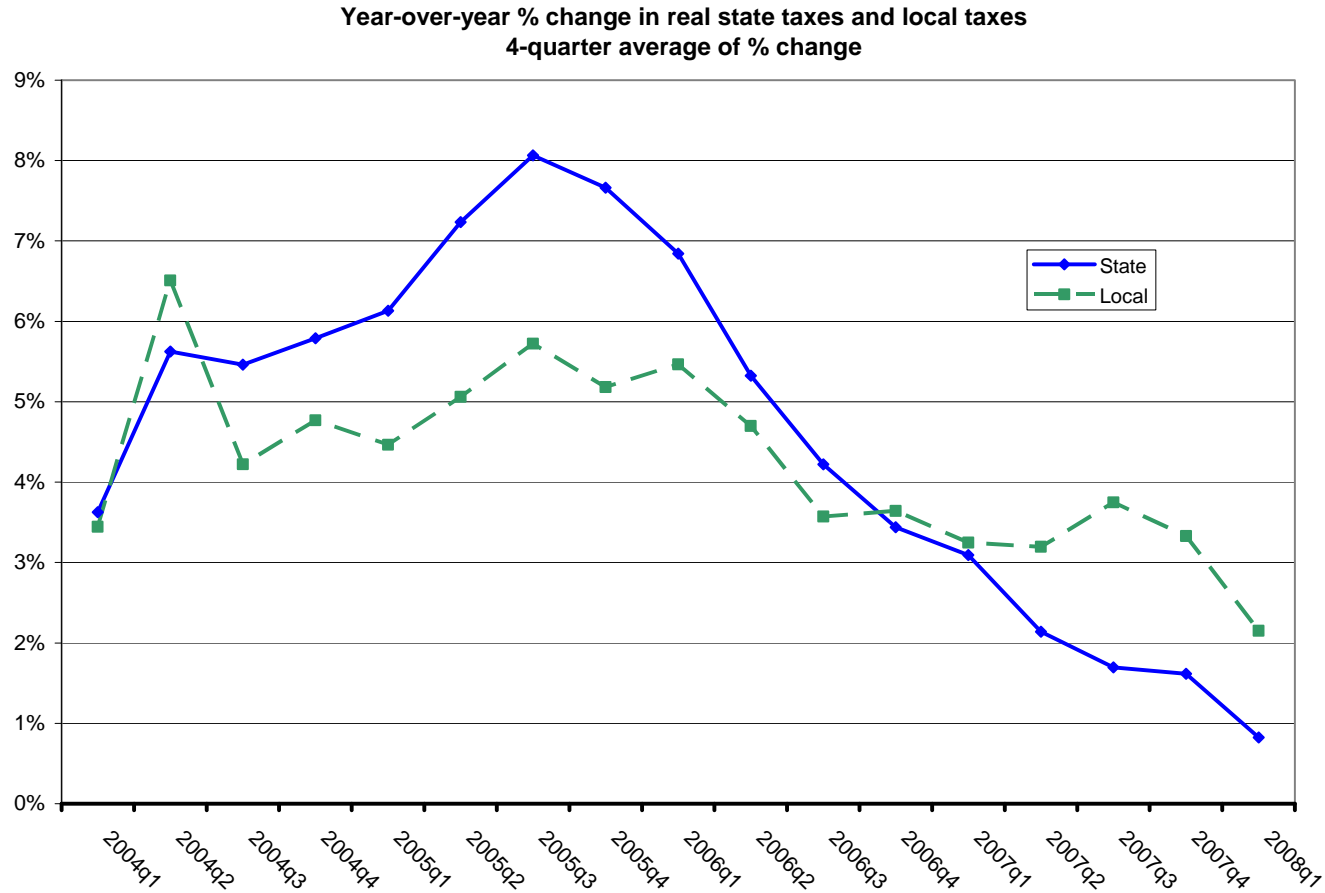
How bad is this compared with past recessions? (4)

(Cautions: Different scales; No adjustments for legislative changes)

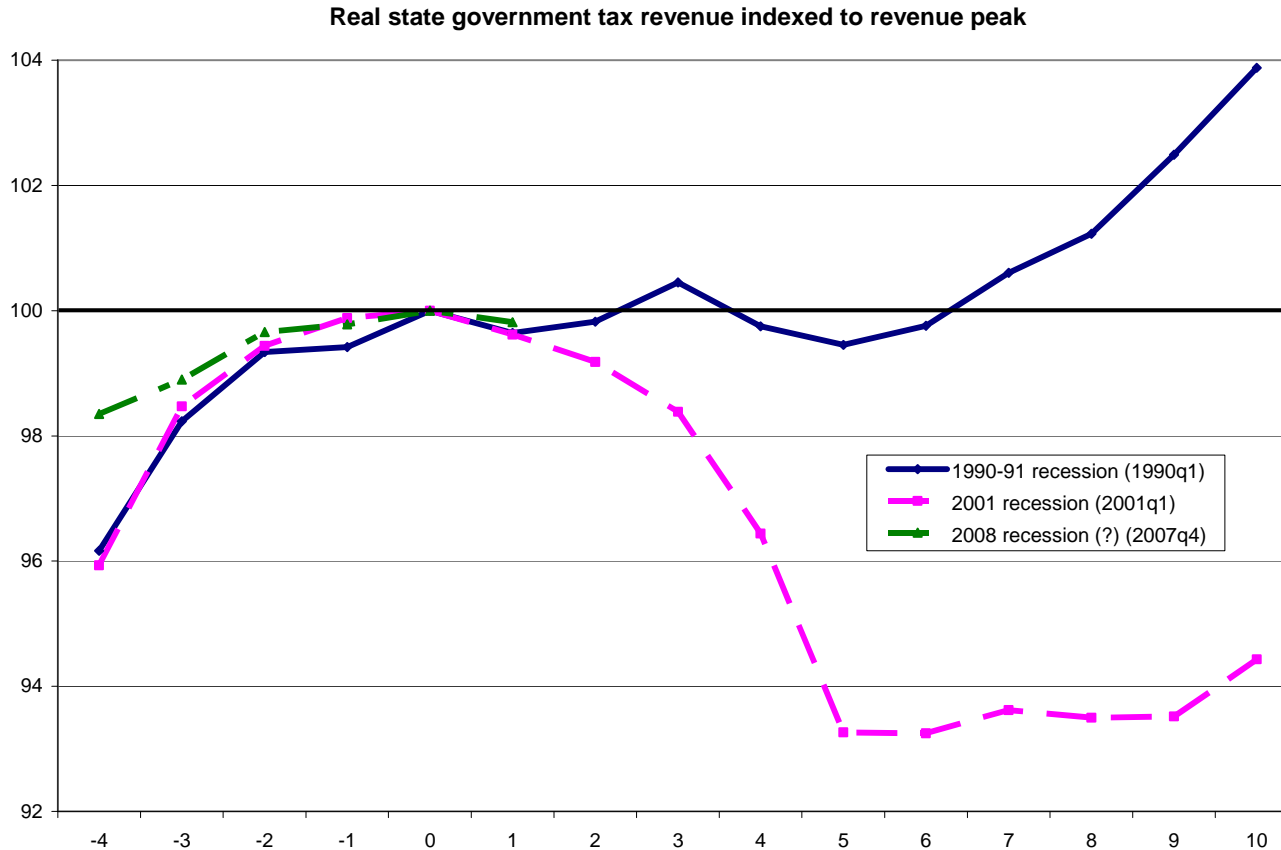


Local Tax Revenue vs. State Tax Revenue

Local taxes have been holding up better than state taxes

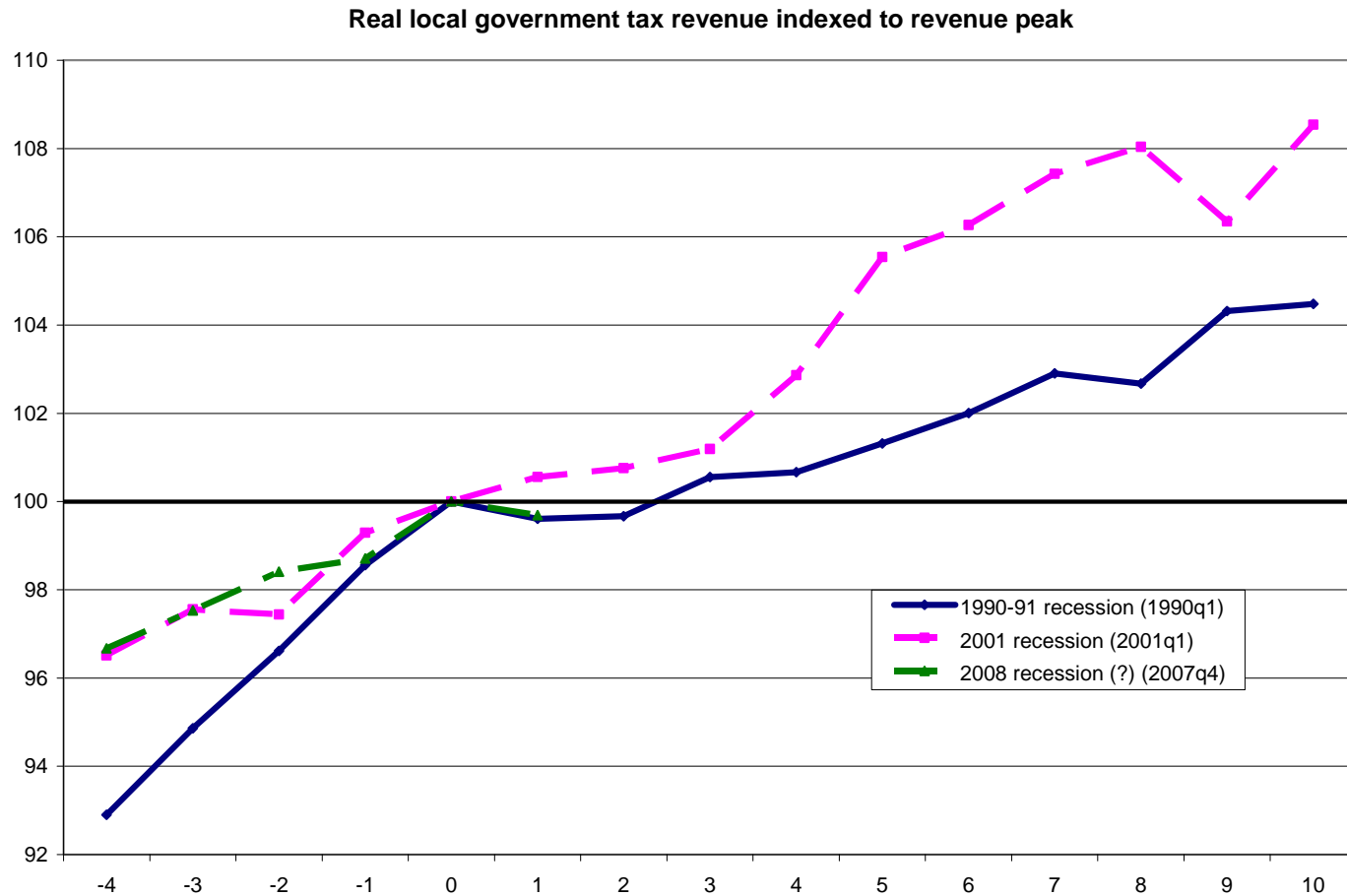


State revenue was hammered in last recession



Sources: Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP price index)
Notes: (1) 4-quarter average of real tax revenue; (2) No adjustments for legislative changes

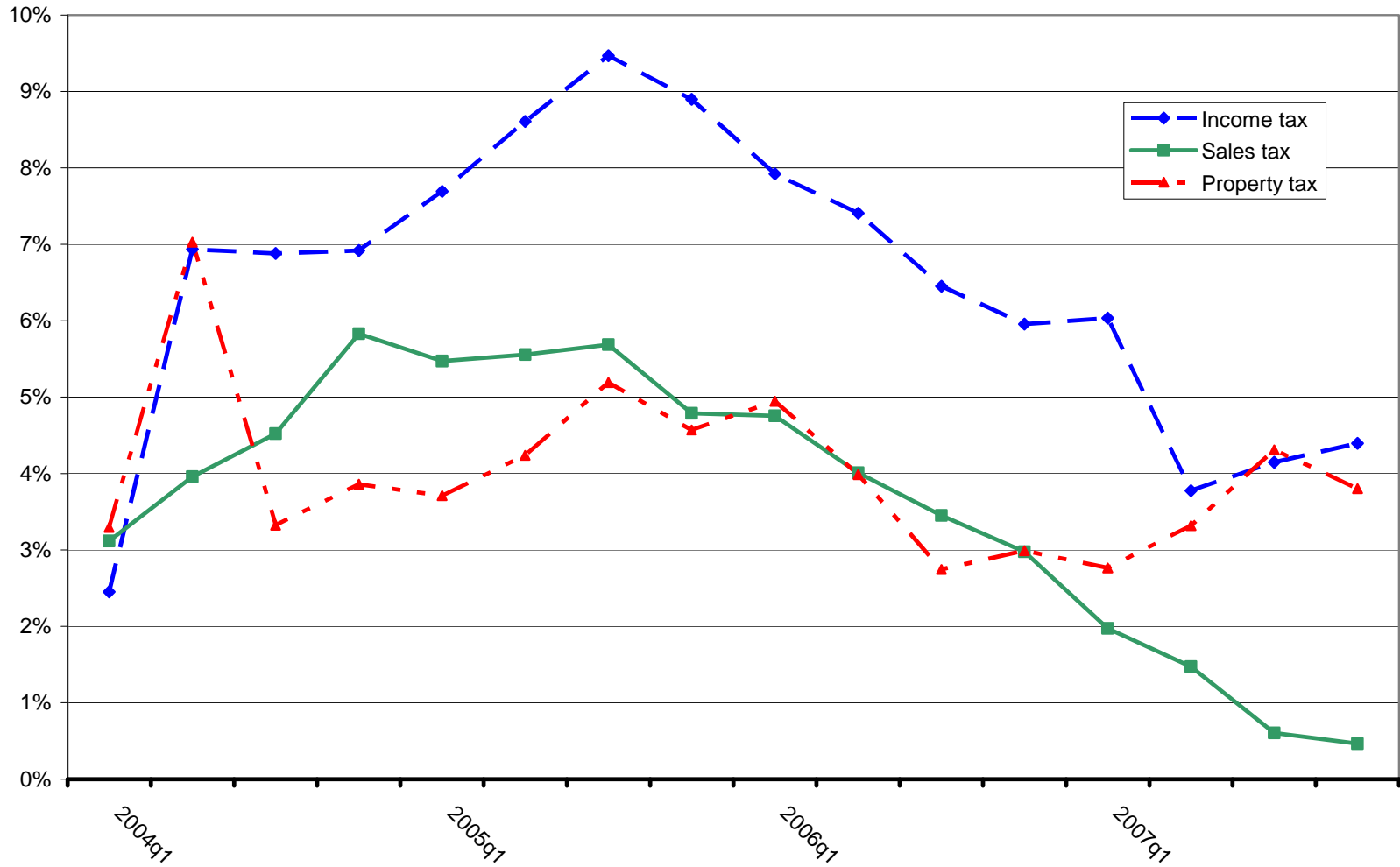
Local revenue was, and is, more stable



Sources: Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP price index)
Notes: (1) 4-quarter average of real tax revenue; (2) No adjustments for legislative changes

Property taxes have been holding up better than other taxes

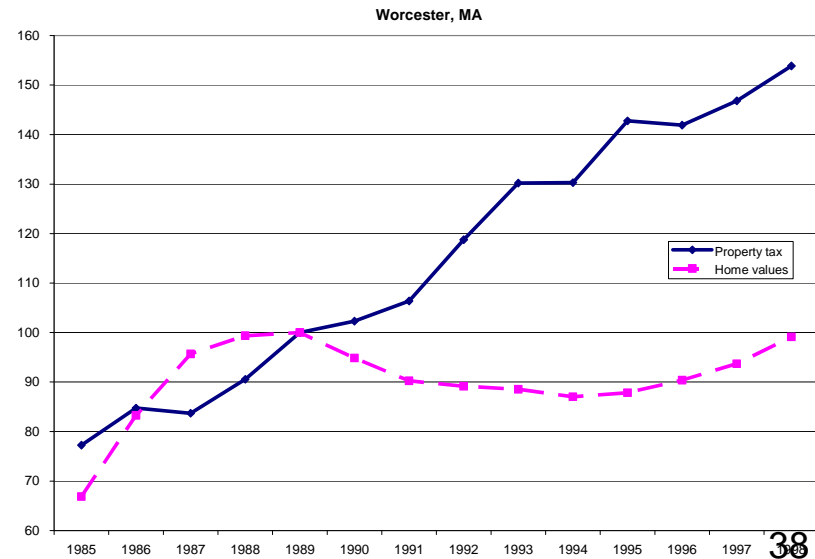
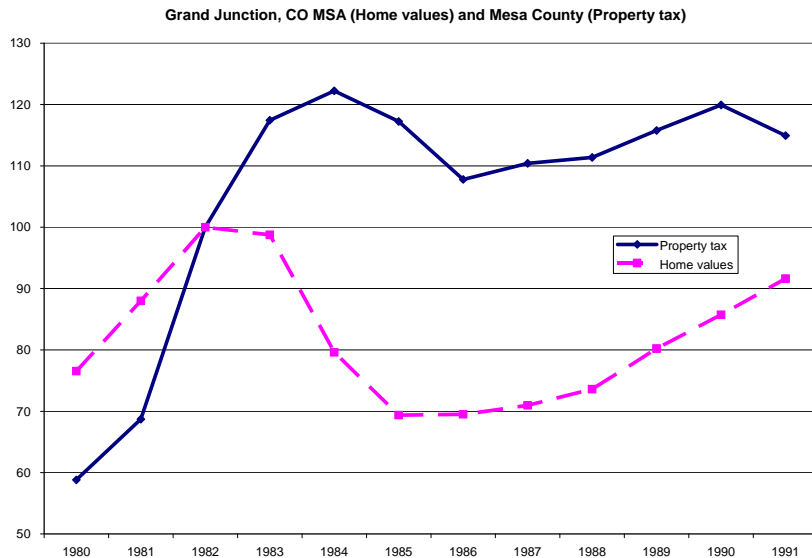
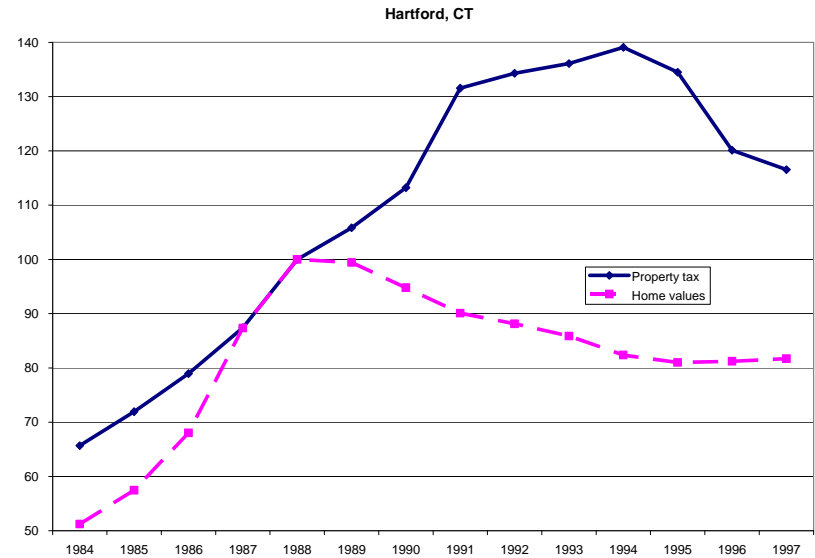
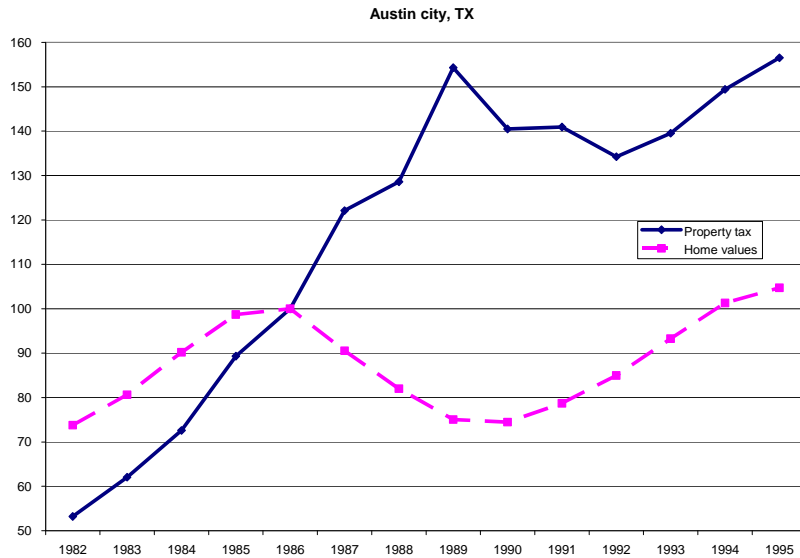
Year-over-year % change in real state & local taxes
4-quarter average of % change



Property taxes and housing busts

- Intervening factors
 - Market values of existing property
 - Assessed values of existing property
 - Assessment caps
 - New construction
 - Impacts of economy on other revenue – especially sales tax, state aid
 - Net impact on tax rates and levy

Exploring history: Property taxes and housing busts



Sources: Census Bureau (taxes – city or county), Office of Federal Housing Enterprise Oversight (Housing price index - MSA)

Recessions, Revenue, and Looking Ahead

2001 was disproportionately an income tax crisis 1990+ was more “balanced”

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

1990 recession period

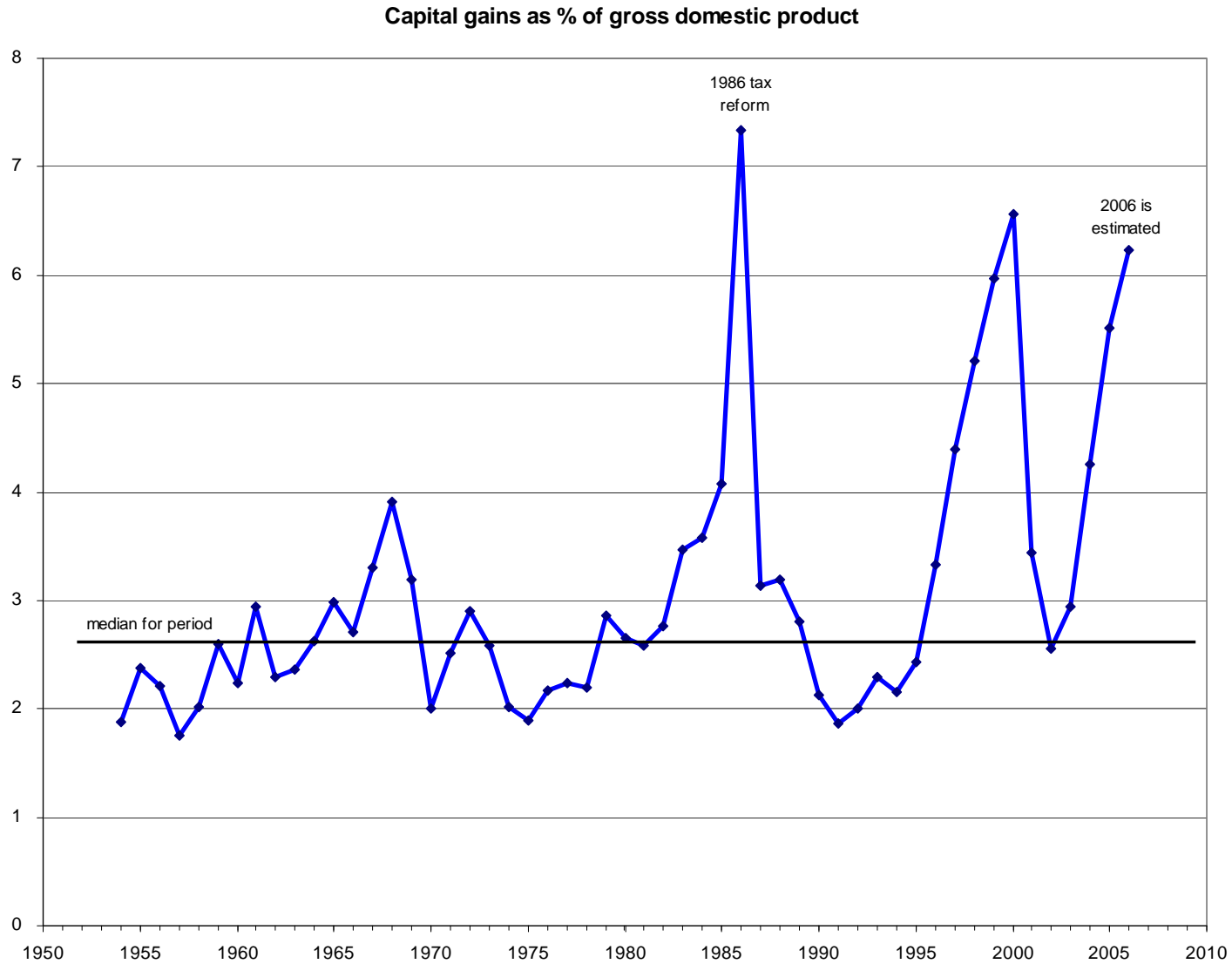
Fiscal year	Sales tax	Income tax	Corporate tax	Median for sum of major taxes
1990	-0.4%	0.6%	-10.6%	-0.7%
1991	-2.3%	-2.4%	-9.9%	-2.6%
1992	-1.1%	-2.4%	-3.5%	-1.7%
Sum	-3.9%	-4.2%	-24.0%	-5.0%

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, a major culprit, are again atypically high

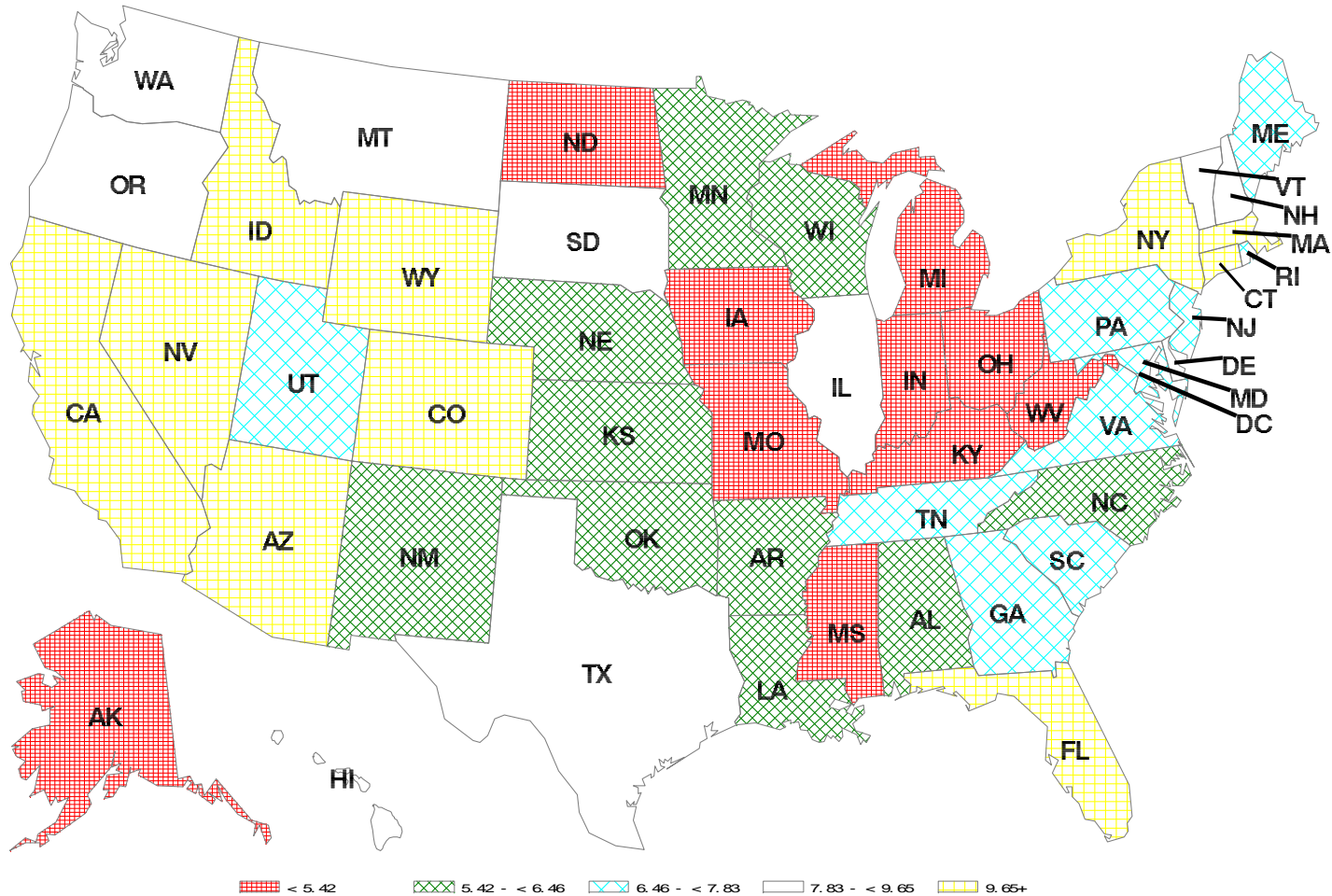


Why capital gains are important

- 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 (Caution: includes non-income tax states)

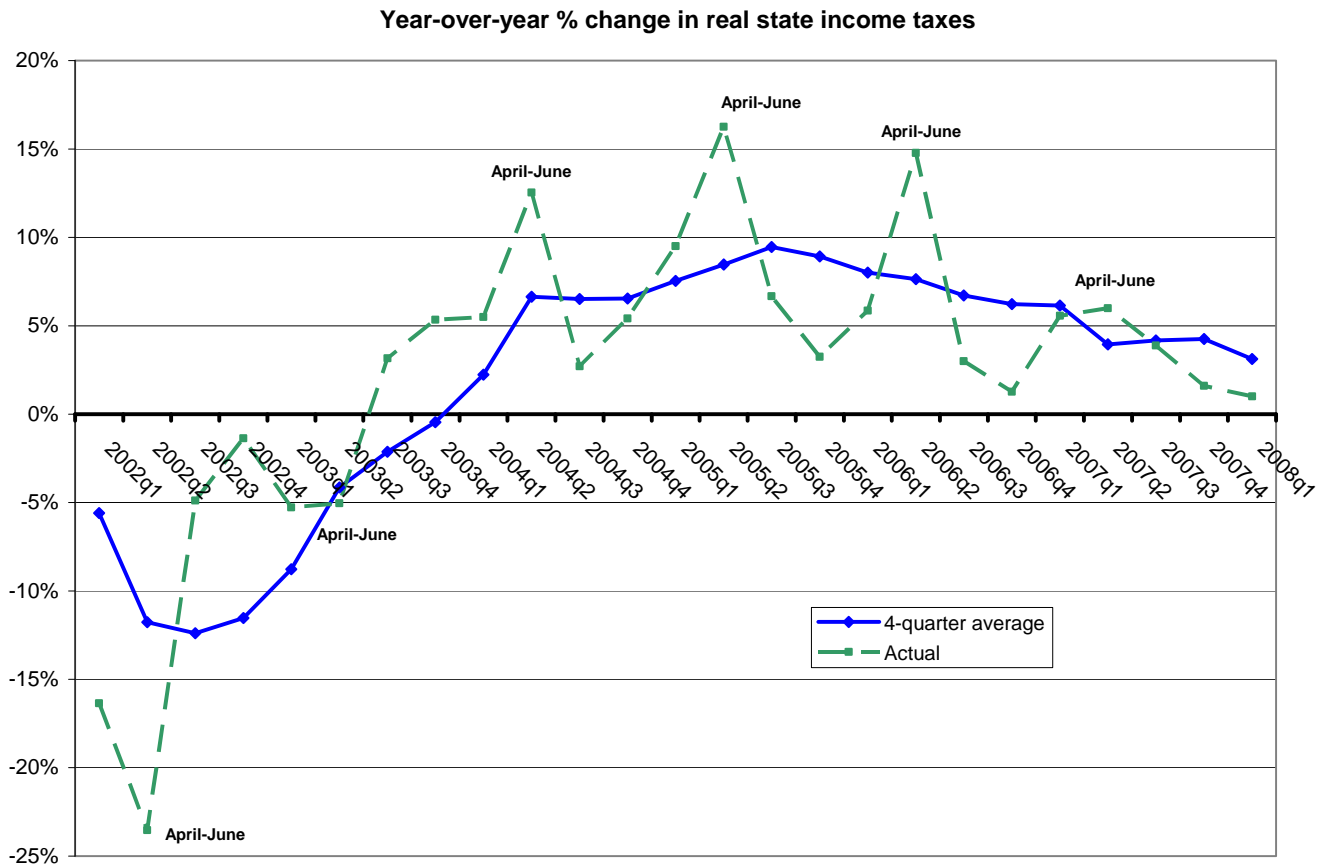
Capital gains as % of AGI in 2005



'Source: Rockefeller Institute analysis of data from IRS'

April-June is important!

(Little data yet, but looks ok this year. Next year?...)



Source: Census Bureau: Quarterly tax collections; Bureau of Economic Analysis: GDP price index

Implications

- States appear to have dodged a bullet at fiscal year-end 2008
- But current economy and related tax collections are weakening significantly in many states
- And outlook for next April tax returns is getting gloomier
- Substantial risk to current-year budgets
- And to budgets for 2008-09
- CSG-WEST states are very varied – including states with strongest economies and weakest economies, and strongest tax growth and worst tax declines

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

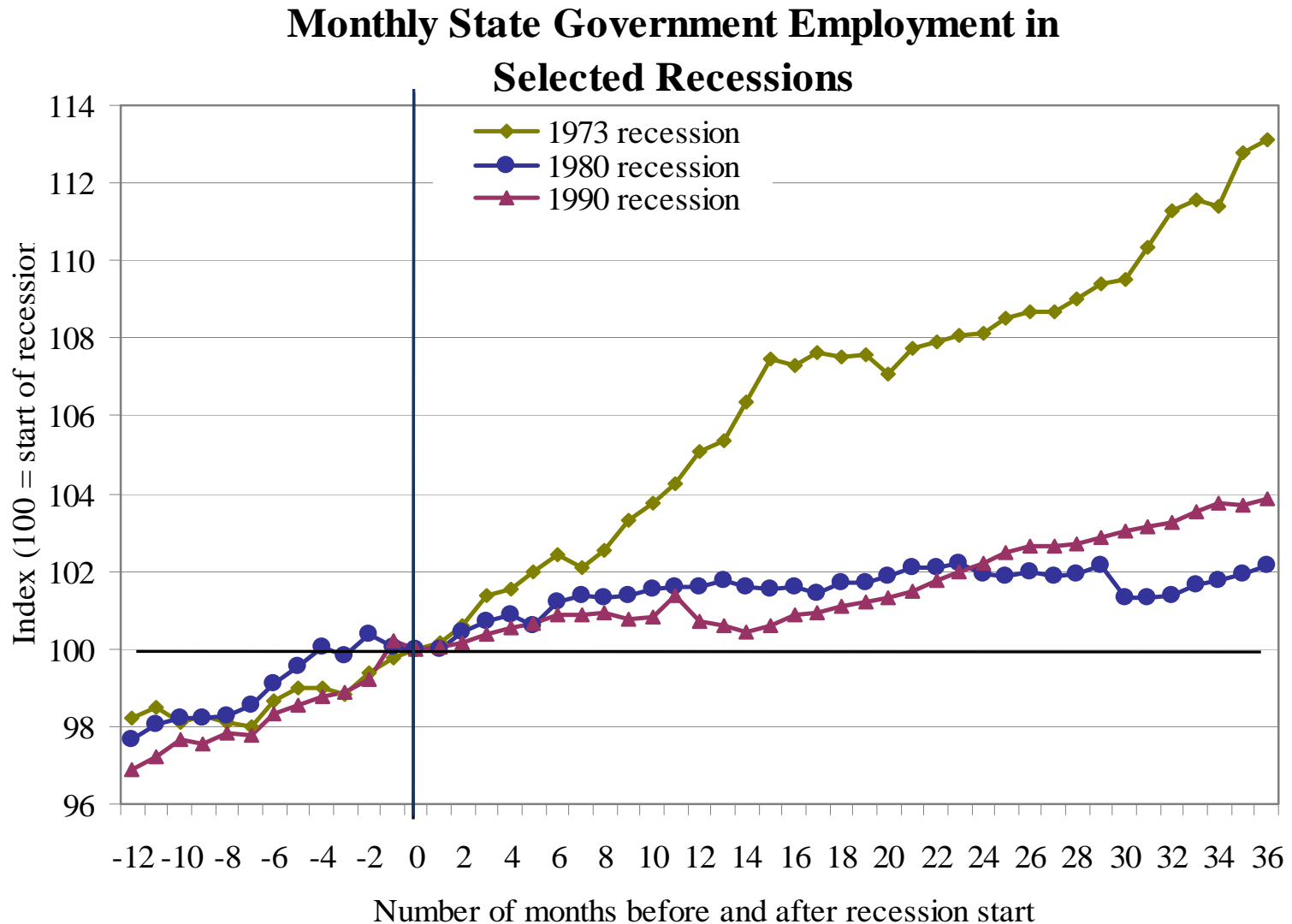
Fiscal crisis and the timing of response

- 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%

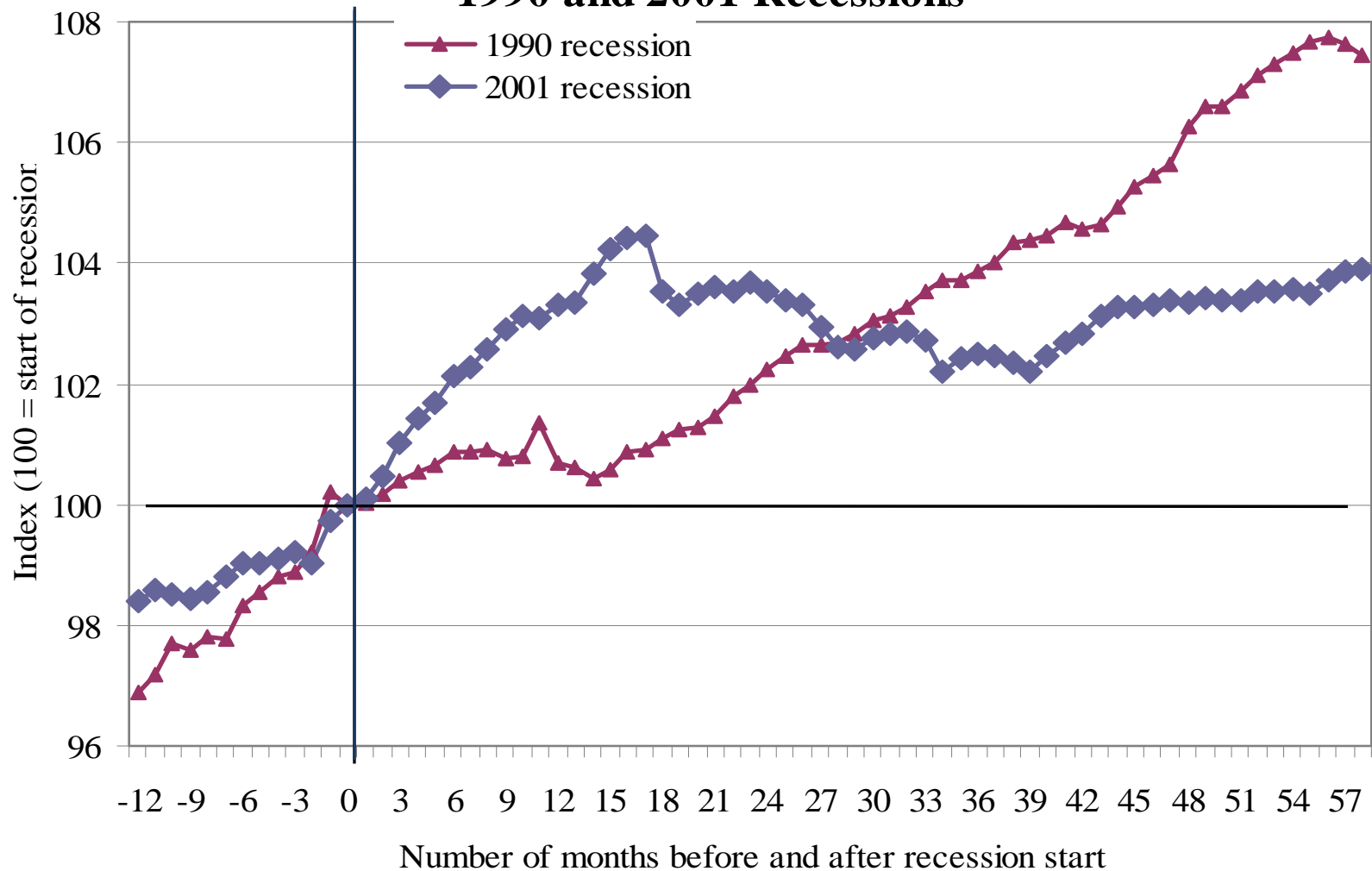
Sources: Rockefeller Institute analysis of (1) data on fund balances, midyear budget cuts, and tax and revenue enactments from NASBO/NGA Fall Survey of the States, and (2) Tax and expenditure data from the Census Bureau.

Fiscal crisis and state responses – employment (1)



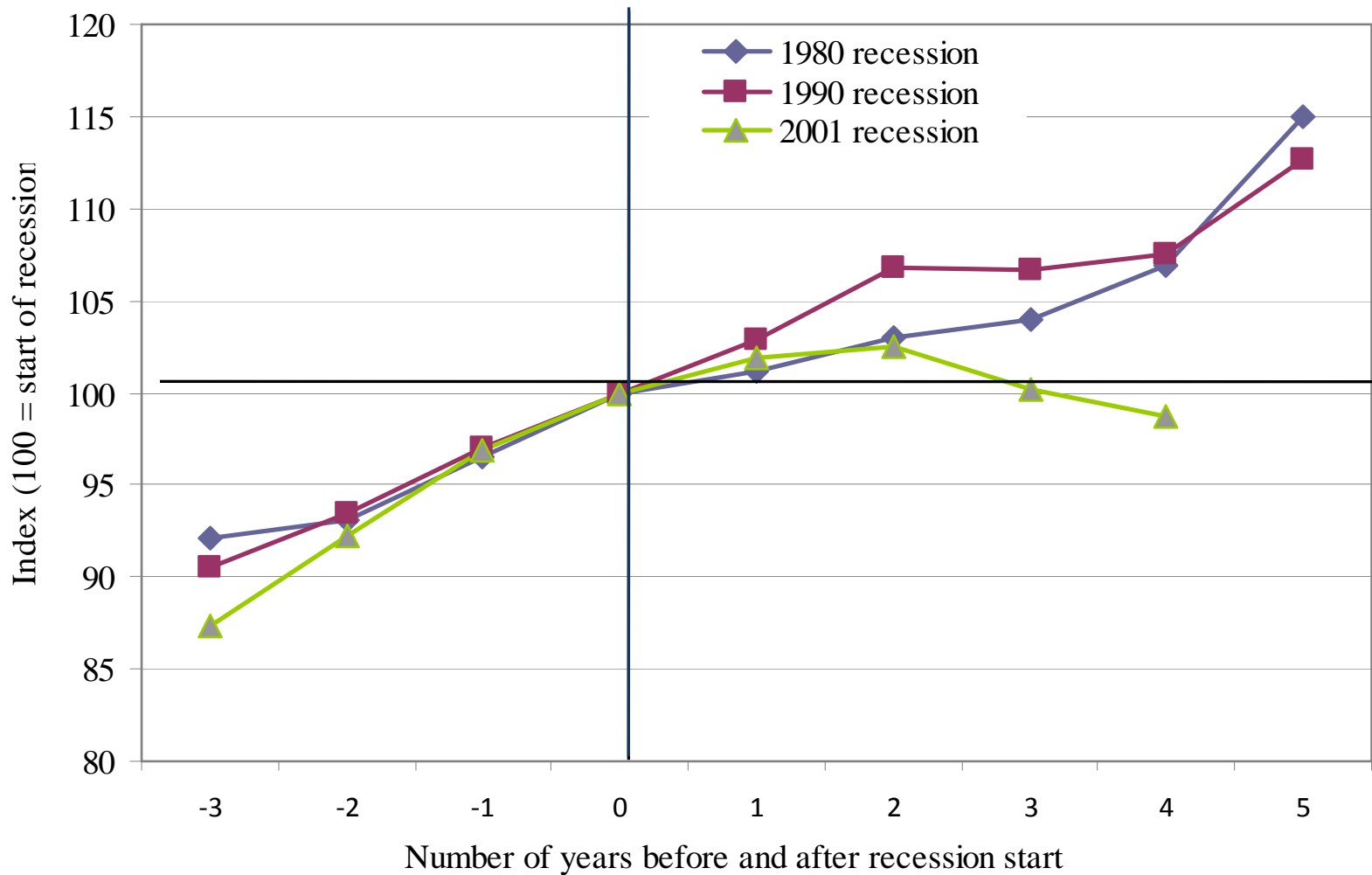
Fiscal crisis and state responses – employment (2)

Monthly State Government Employment in 1990 and 2001 Recessions



States curtailed spending after last recession

Self-Financed General Expenditures



Recap and Conclusions

- Worst fiscal effects so far have been in housing-hammered states – especially AZ, CA, FL, NV, and RI. Many other states, especially on sales tax, particularly in the southeast. Should be weak again this quarter.
- CSG-WEST states have had very varied impacts, ranging from AK strength to AZ/CA/NV weakness – these states have had the 3 largest budget gaps in the nation.
- April-June is critical for income tax in short term (and again a year from now)
- Last year's economy looks to be doing pretty well – preliminary data from 2007 tax return payments – welcome relief from current-economy weakening
- If economy & revenue worsen, budget gaps will have been “undersolved”
- Could trigger another round of midyear cuts, and deeper more-structural solutions in 2009-10

Appendix

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

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					

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

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