

U.S. Municipal Credit Update

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2011 Credit Markets Symposium

Federal Reserve Bank of Richmond

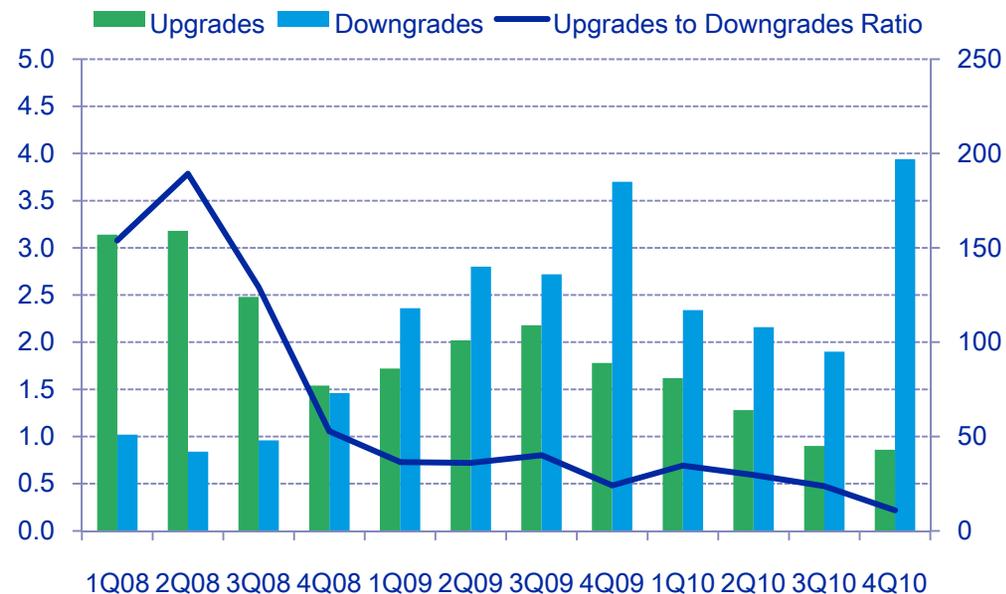
Charlotte, North Carolina

March 31, 2011

Unprecedented financial stress across sectors

- Recession is over, but economic recovery is tepid
- State and local governments are lagging in recovery
- End of federal stimulus will make 2011 an even more stressful year for state and local governments
- Moody's has had negative outlooks on state and local governments for 3 years
- Downgrades have outpaced upgrades for 8 consecutive quarters

Rating Downgrades-to-Upgrades, by Number of Issuers



Very few rated municipal bonds have defaulted

- » From 1970 to 2009, 54 Moody's rated municipal issuers defaulted
 - » 78% were in non-profit hospital or housing project sectors
- » Average recovery on defaulted municipal bonds has been 59% of par, compared to 37% for defaulted corporate bonds

Default Counts by Purpose

Purpose	Ratings Outstanding	Defaults
Housing	1,041	21
Health Care	650	21
Electric, Water or Sewer Enterprise	1,645	3
Higher Education	843	1
Recreation	93	1
City, Town, County – Non-General Obligation	2,342	4
General Obligation	8,610	3
Total	15,224	54

Defaults are higher among unrated bonds

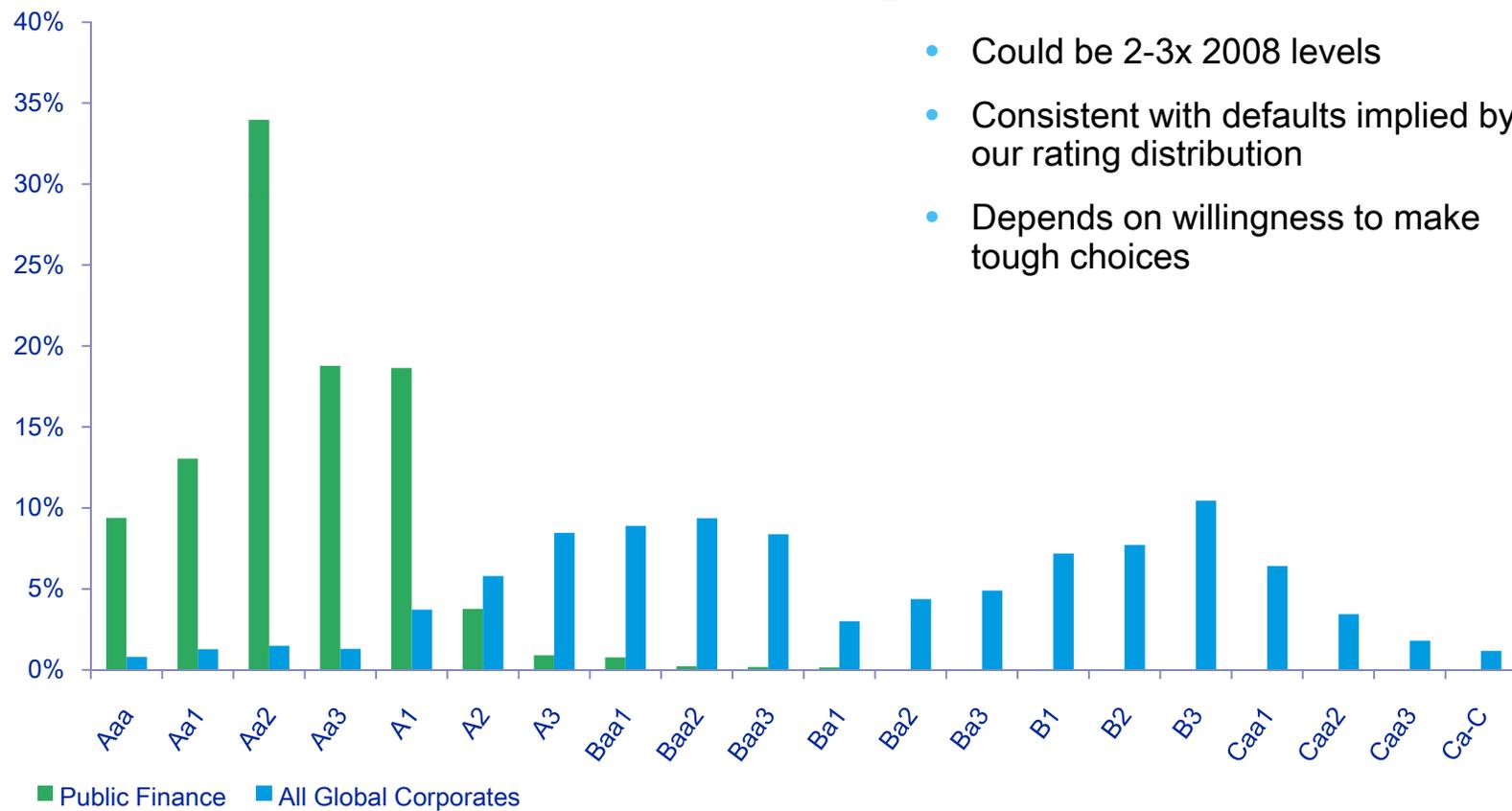
Recent US Municipal Defaults

	2008	2009	2010
Issuers (#)			
Rated by Moody's	5	1	1
Unrated and Rated by Moody's	167	207	82
Volume (\$millions)			
Rated by Moody's	\$ 3,678	\$ 24	\$ 25
Unrated and Rated by Moody's	\$ 8,518	\$ 7,330	\$ 2,713

Source: Moody's and Income Securities Advisor, Inc.

Rated defaults expected to increase in 2011

Municipal vs. Global Corporate Ratings



- Rated defaults expected to increase in 2011
 - Could be 2-3x 2008 levels
 - Consistent with defaults implied by our rating distribution
 - Depends on willingness to make tough choices

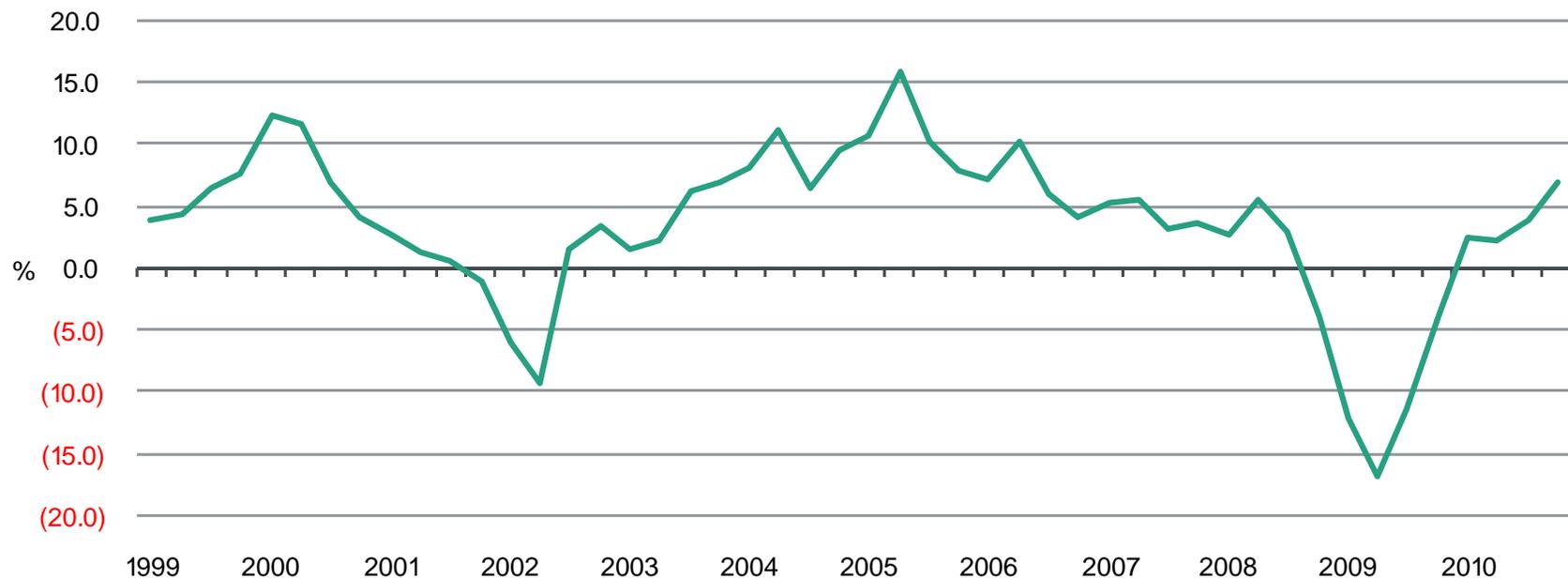
Most munis could weather market access disruption

Relative Strength of State Liquidity

No Need for Borrowing	Need for Internal Borrowing	Need for External Borrowing	Need for Internal and External Borrowing
Alabama	Connecticut	Arizona	California
Alaska	Florida	Colorado	Illinois
Arkansas	Kentucky	Hawaii	Rhode Island
Delaware	Louisiana	Idaho	
Georgia	Maryland	Iowa	
Indiana	Missouri	Kansas	
Mississippi	New York	Maine	
Montana	South Dakota	Massachusetts	
Nebraska	Virginia	Michigan	
Nevada	Washington	Minnesota	
North Carolina		New Hampshire	
North Dakota		New Jersey	
Ohio		New Mexico	
Oklahoma		Oregon	
South Carolina		Pennsylvania	
Tennessee		Texas	
Utah		Wisconsin	
Vermont			
West Virginia			

Negative outlook for states: toughest year yet

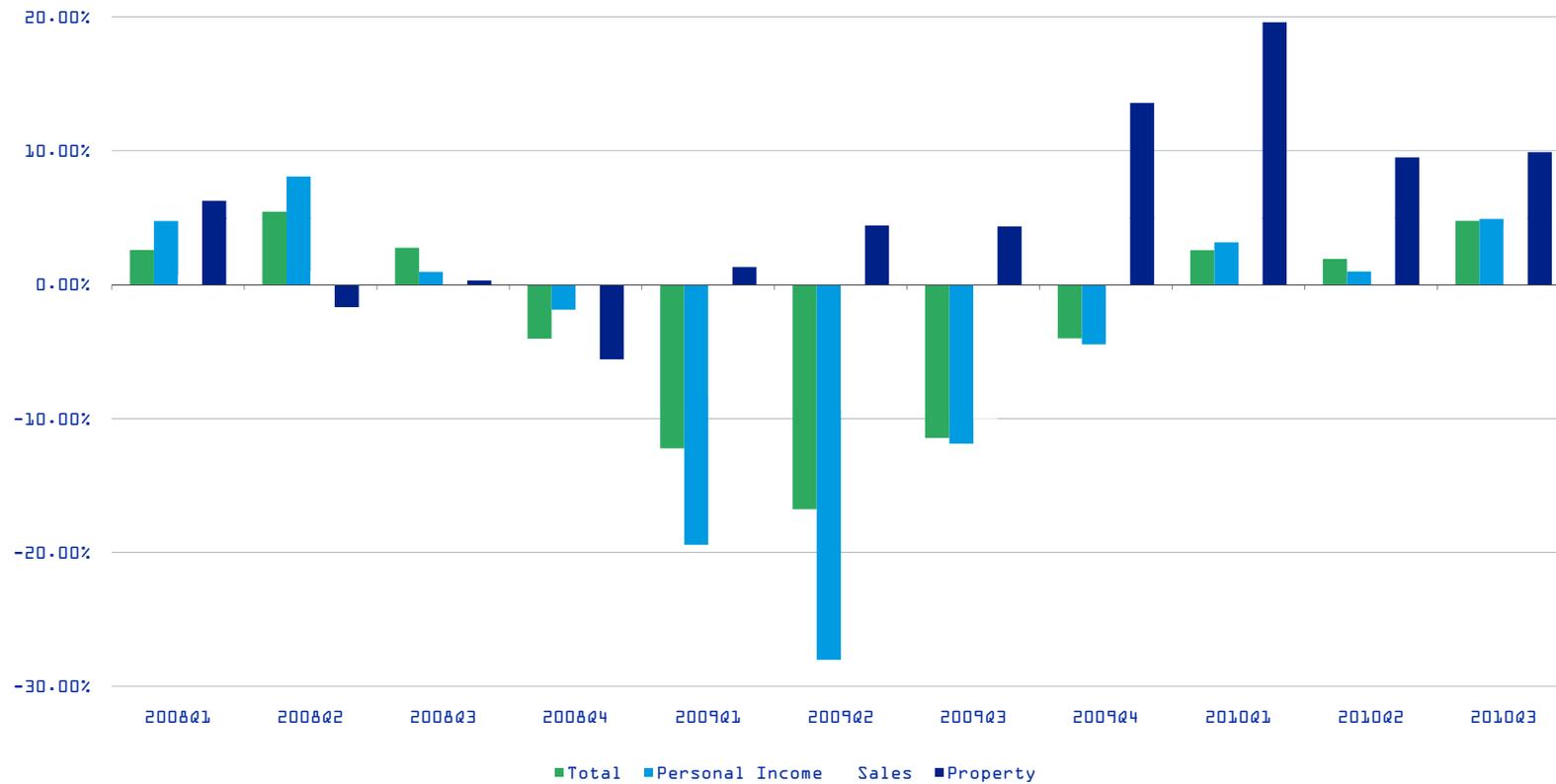
Quarterly Percentage Change in Total State Tax Revenue



Source: Rockefeller Institute of Government

States face a revenue and spending crisis, not a debt crisis

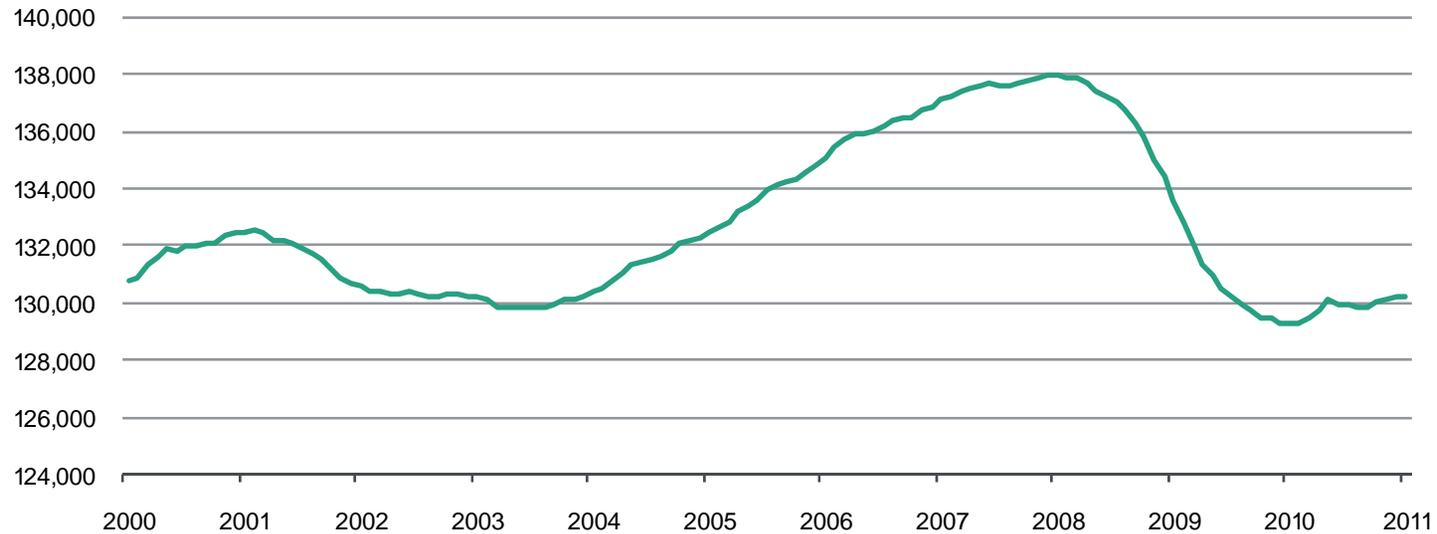
State and local government quarterly tax revenue performance



Source: Bureau of Census

Low revenue growth + fragile recovery = challenges

U.S. Nonfarm Employment (000s)



Source: Bureau of Labor Statistics

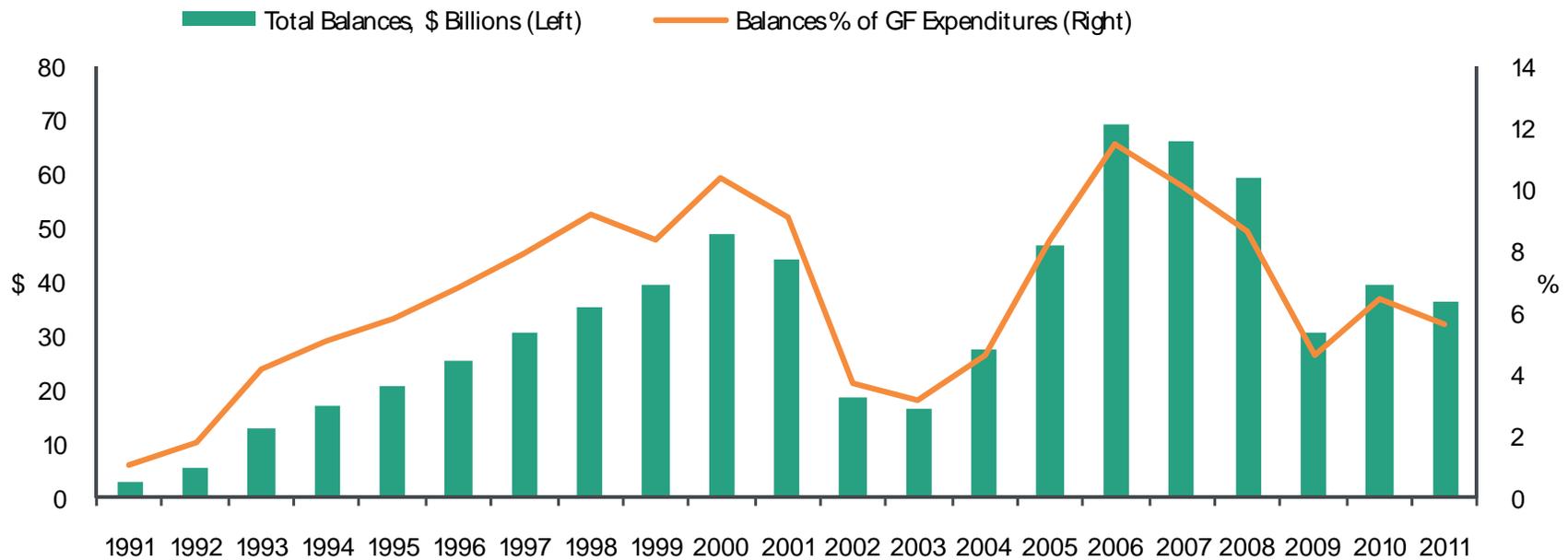
Baseline Economic Growth Assumptions, 2011-2015

	2011	2012	2013	2014	2015
Real GDP Growth	3.2%	3.2%	3.3%	3.1%	2.8%
Non-farm Employment Growth	1.3%	1.6%	2.0%	2.6%	1.8%
Unemployment Rate	9.4%	8.3%	7.4%	6.3%	6.0%
Personal Income Growth	5.1%	6.1%	7.7%	5.8%	4.8%
Per Capita Personal Income	\$42,052	\$44,187	\$47,154	\$49,405	\$51,293

Source: Moody's Investors Service

State reserves are half of pre-recession levels

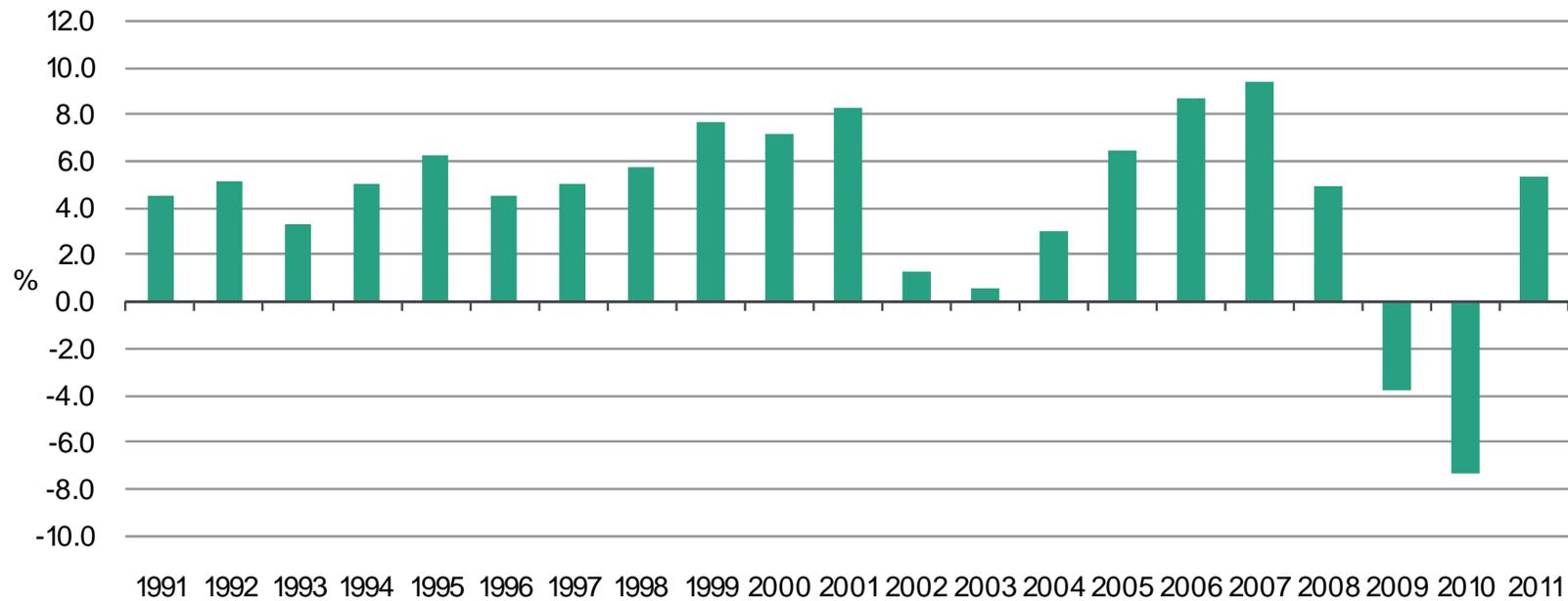
Fiscal Year-End Balances+Reserves as Percent age of General Fund Expenditures



Source: National Association of State Budget Officers

States face difficult choices

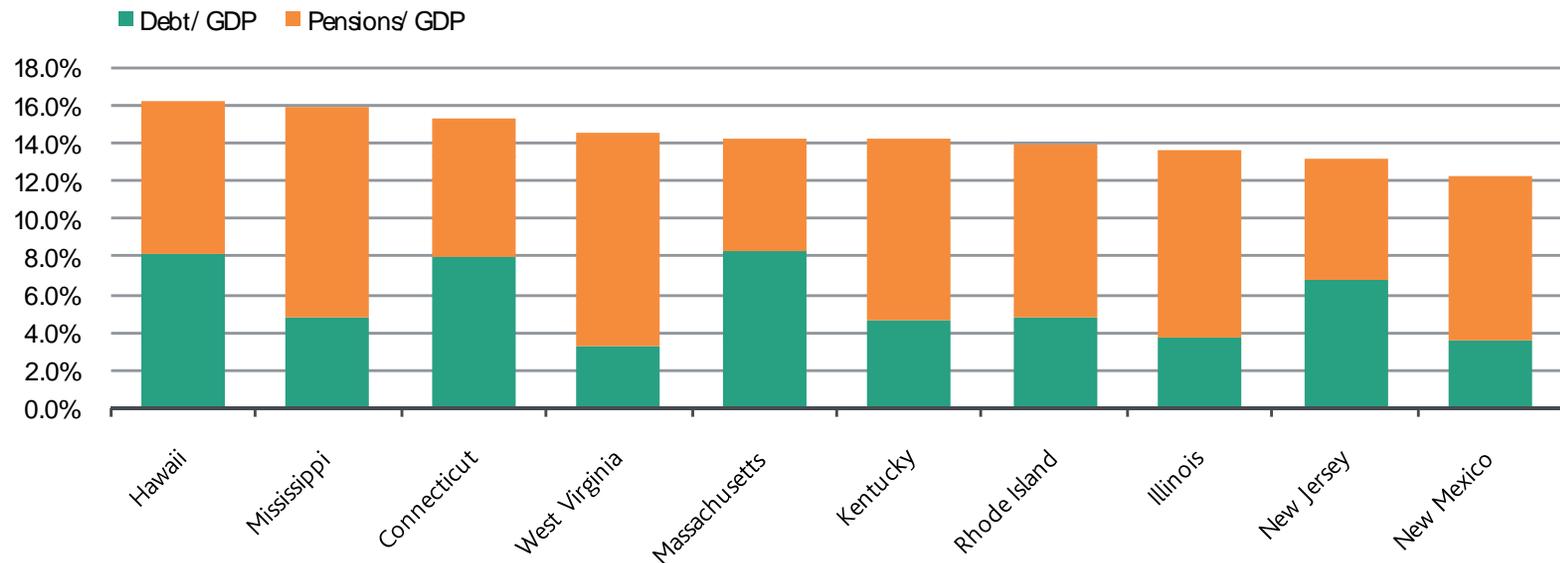
Annual Percentage Change in State General Fund Spending by Fiscal Year



Source: National Association of State Budget Officers

Pension funding pressures continue

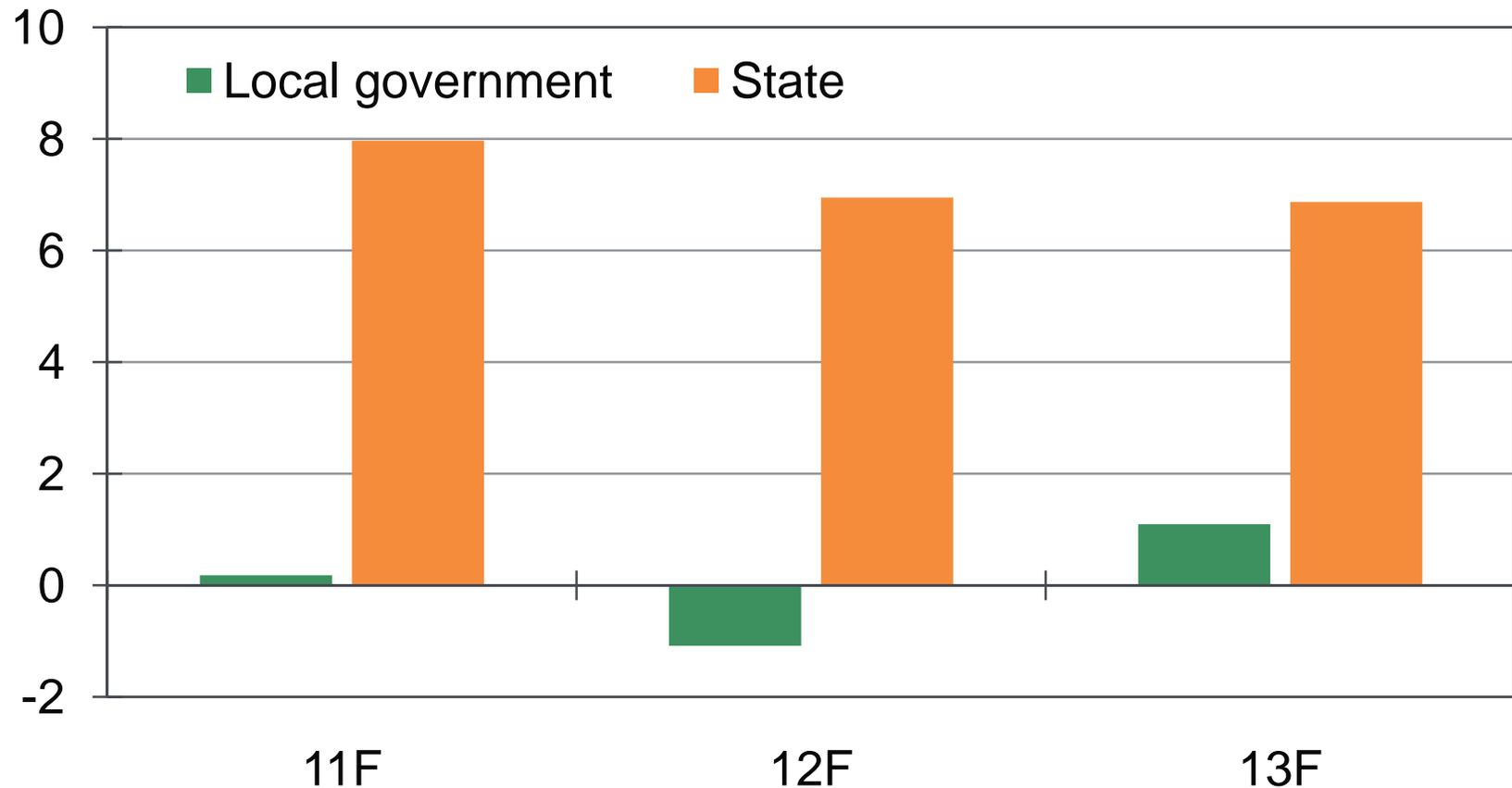
Combined Liabilities as Share of GDP – Top 10 States



Source: Moody's Investors Service

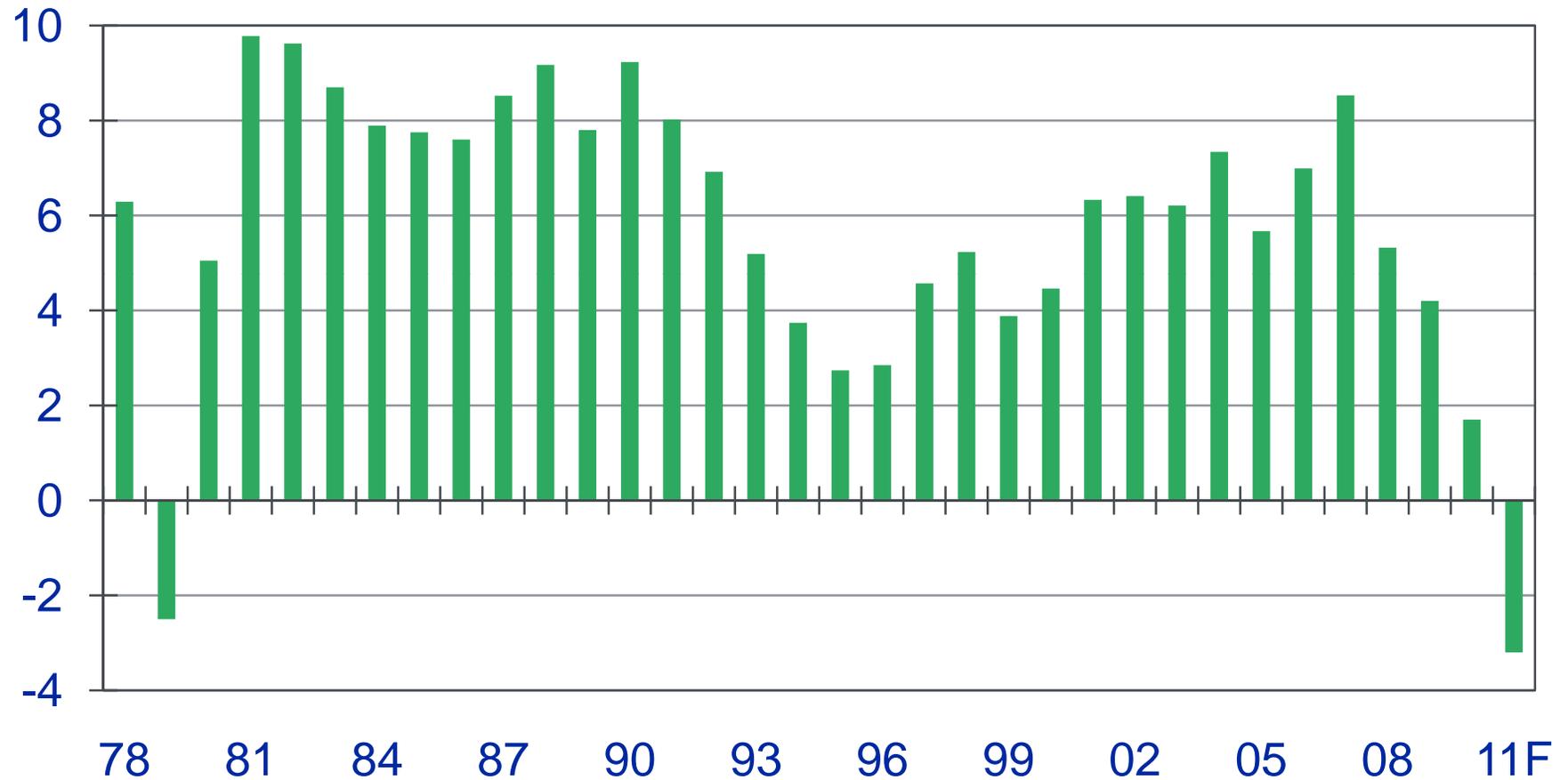
Local governments will underperform states

Tax revenues, fiscal yr, % change



Sources: Census Bureau, Moody's Analytics

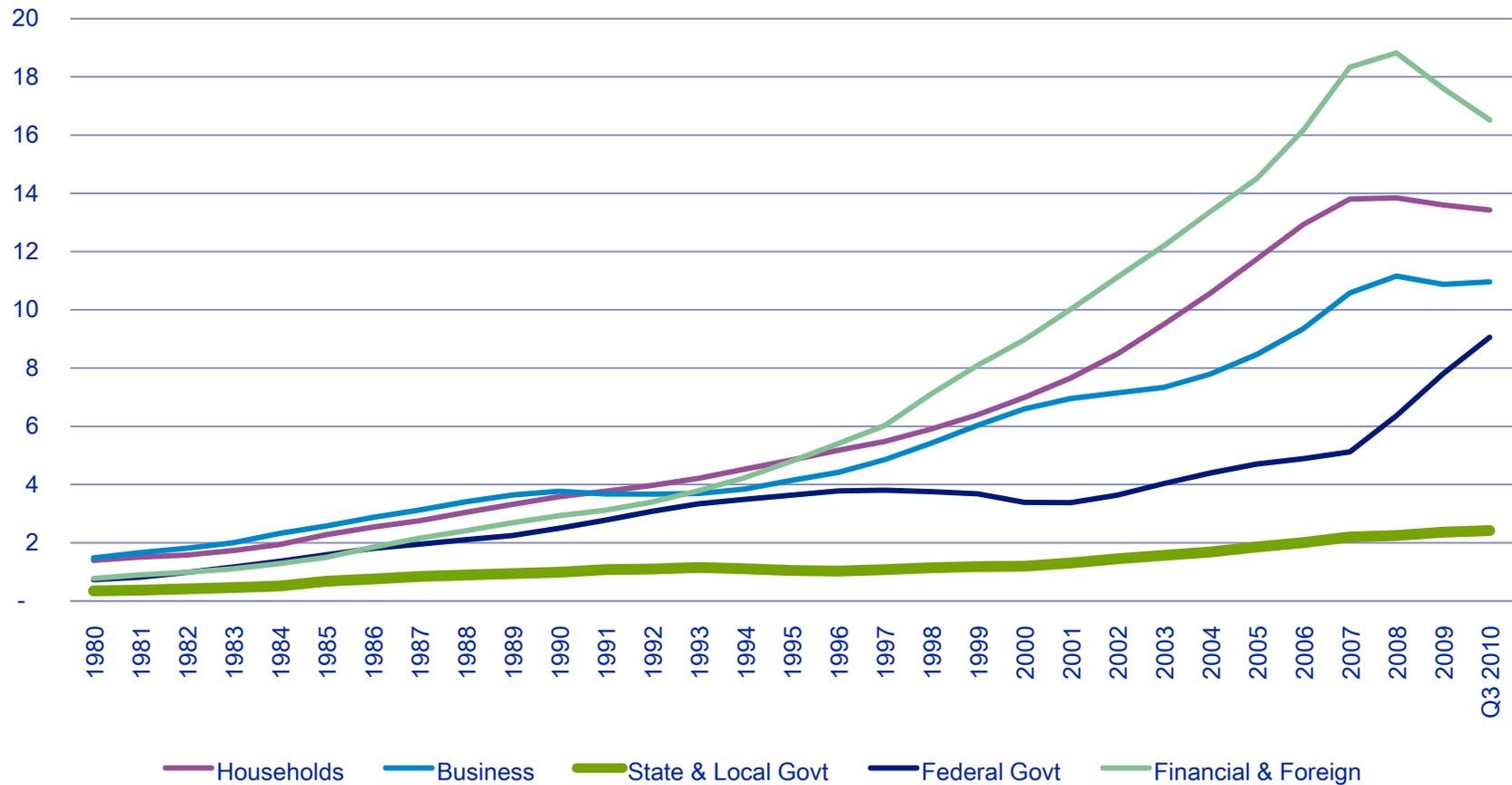
Recession will finally hit property taxes



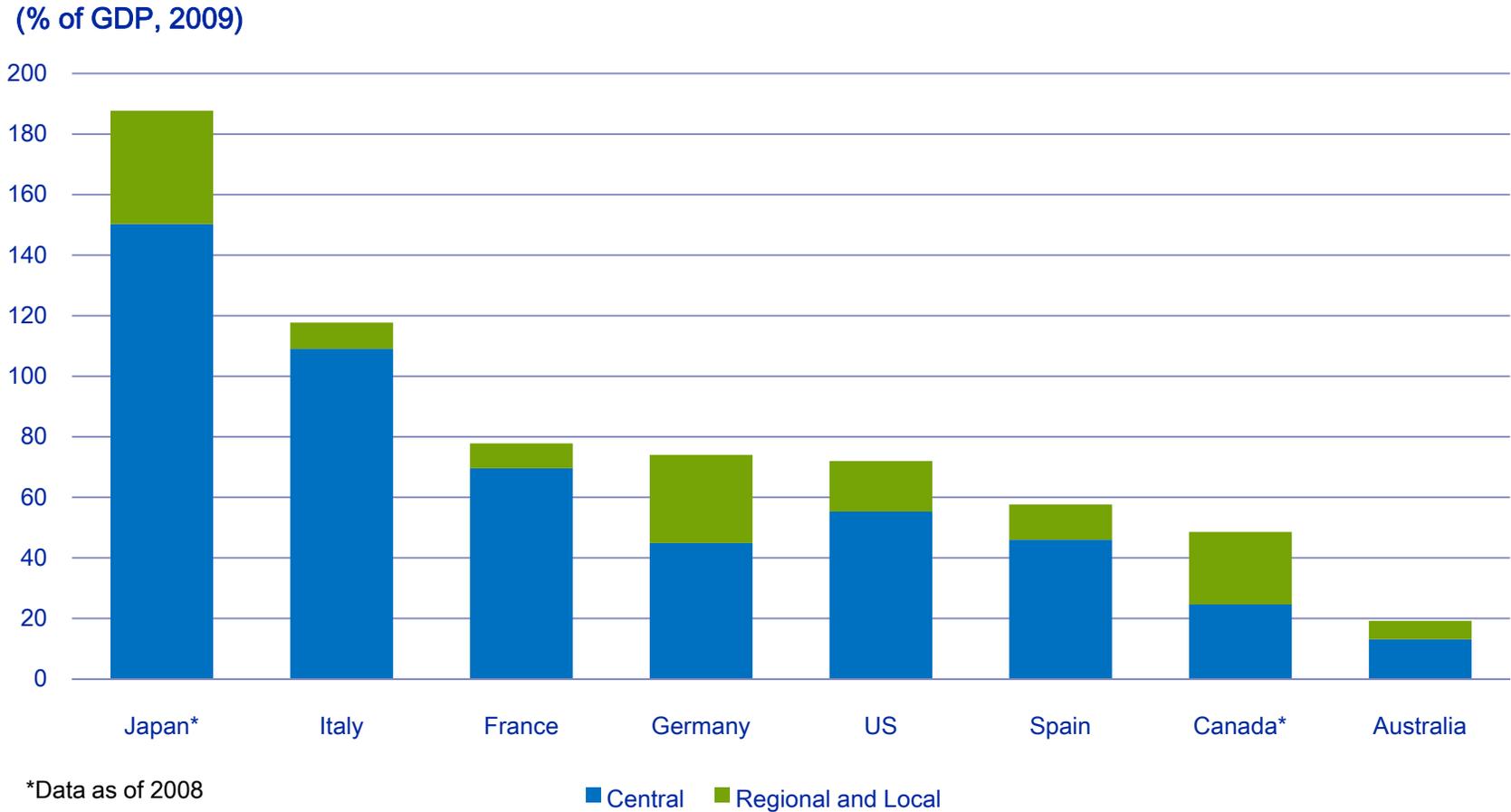
Source: Census Bureau, Moody's Analytics

State and local debt growing, but slower than other sectors

(trillions of dollars)



Total US public debt lower than other major economies



What are we watching? What could change?

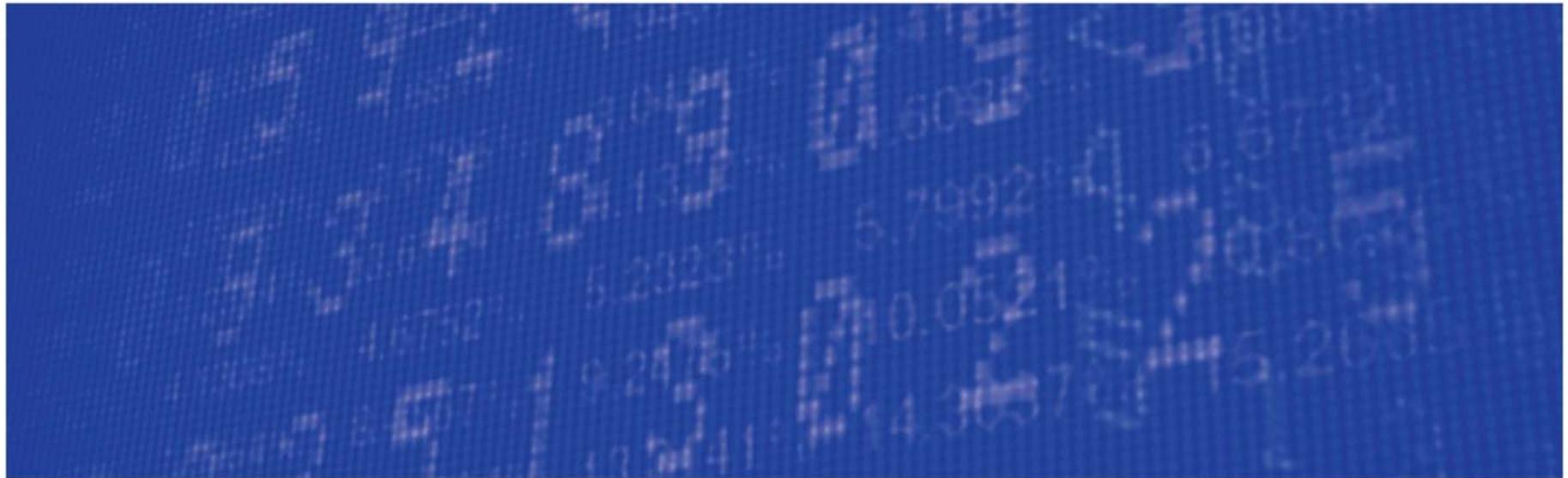
- » **States:** Revenues remain weak, but most will manage through spending cuts, use of reserves and federal stimulus money
 - **Risks:**
 - » Expiration of federal stimulus funds in June 2011 creates large gaps
 - » Entitlement spending for pension, OPEBs, Medicaid continues to grow
 - » Material shift in market confidence

- » **Local Governments:** Small, weaker issuers will be most stressed, some distressed
 - **Risks:**
 - » Further state aid cuts
 - » Some have exposure to enterprise risk with outsized debt levels
 - » Exposure to financial institutions, liquidity and credit facilities expiring
 - » Breakdown in political process that results in failure to pay debt, bankruptcy filing

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