

# What Would A Speculative Grade US State Look Like?

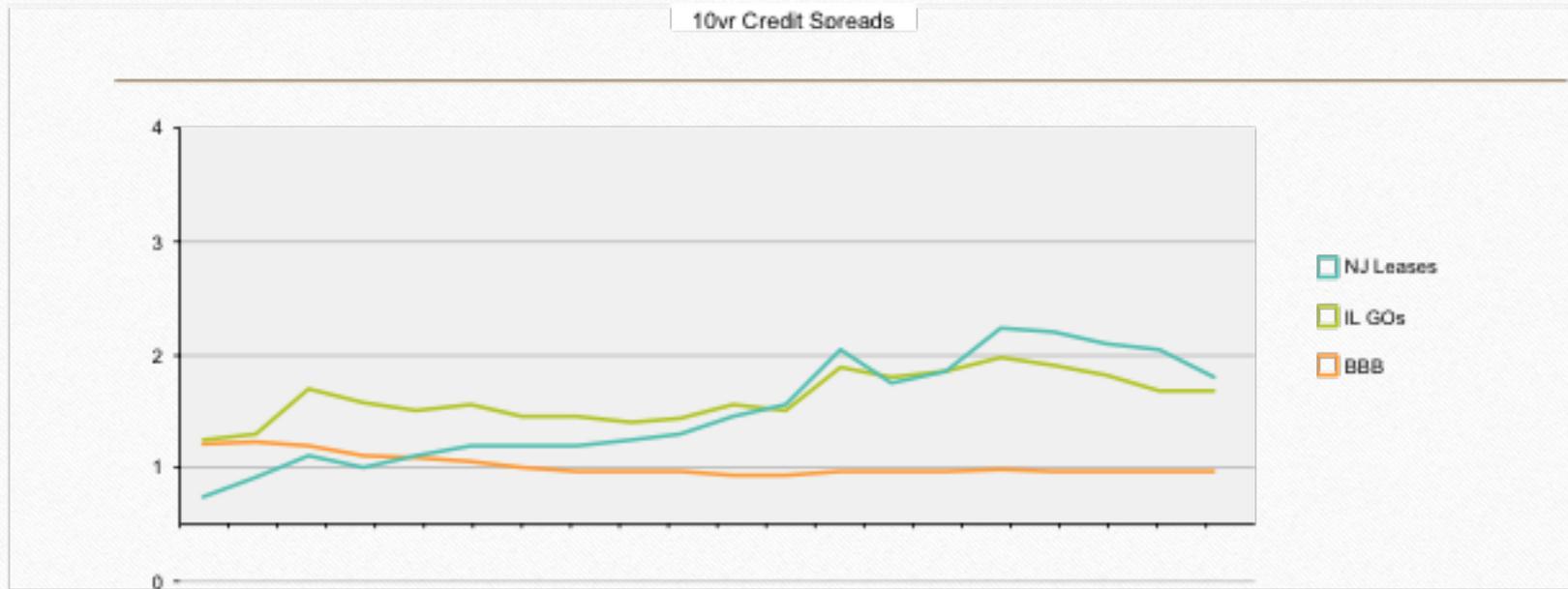
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Municipal Analysts' Group of New York

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# What Is the Market Telling Us?

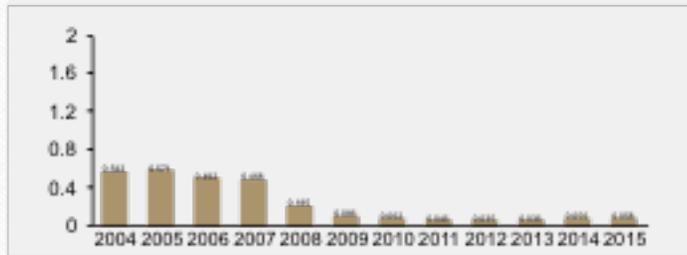
## Illinois and New Jersey Trade at “High Yield” Levels



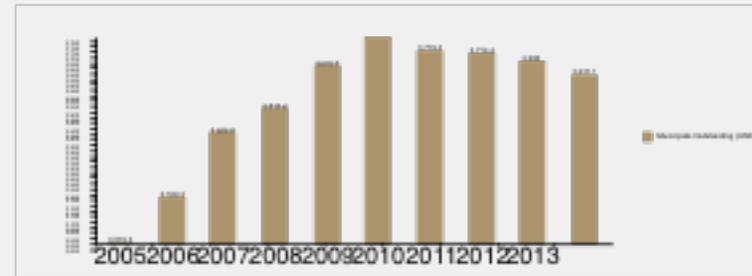
Source: Municipal Market Data Corporation and AllianceBernstein estimates

# How Has the Municipal Market Changed?

**Fewer Bonds Are Being Insured**  
Percent of New Issuance with Insurance



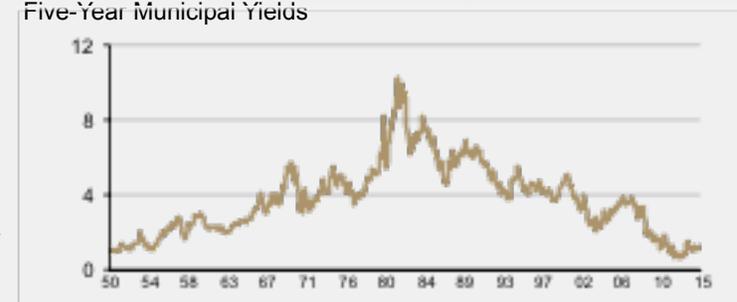
**It's More Difficult to Source Bonds\***



**Transaction Costs Are Higher**  
Price Mark Ups

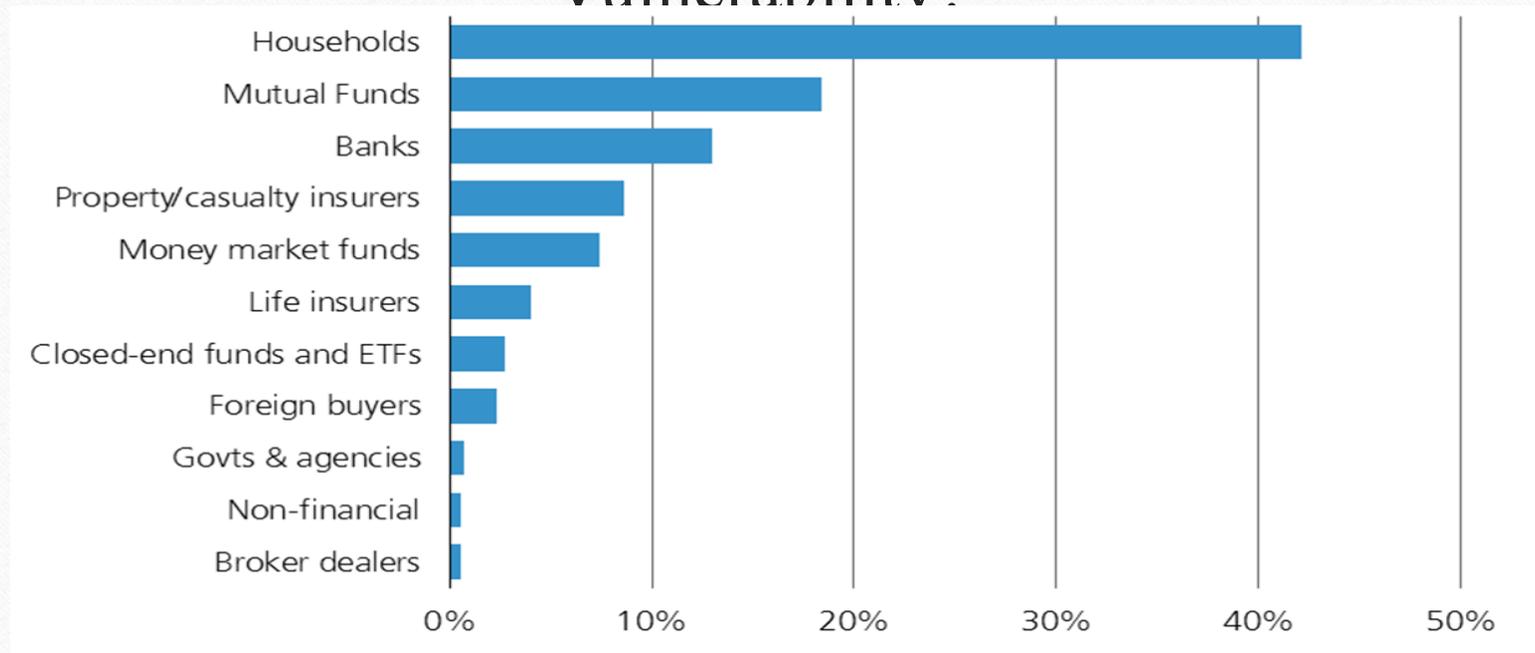


**Interest Rates Are Likely to Rise Slowly**  
Five-Year Municipal Yields



Source: Federal Reserve Flow of Funds, Moody's, The Bond Buyer, the SEC and AllianceBernstein estimates

# Does Municipal Investor Base Increase States' Vulnerability?



Source: Federal Reserve Board, Flow of Funds Accounts, 2Q 2015, UBS

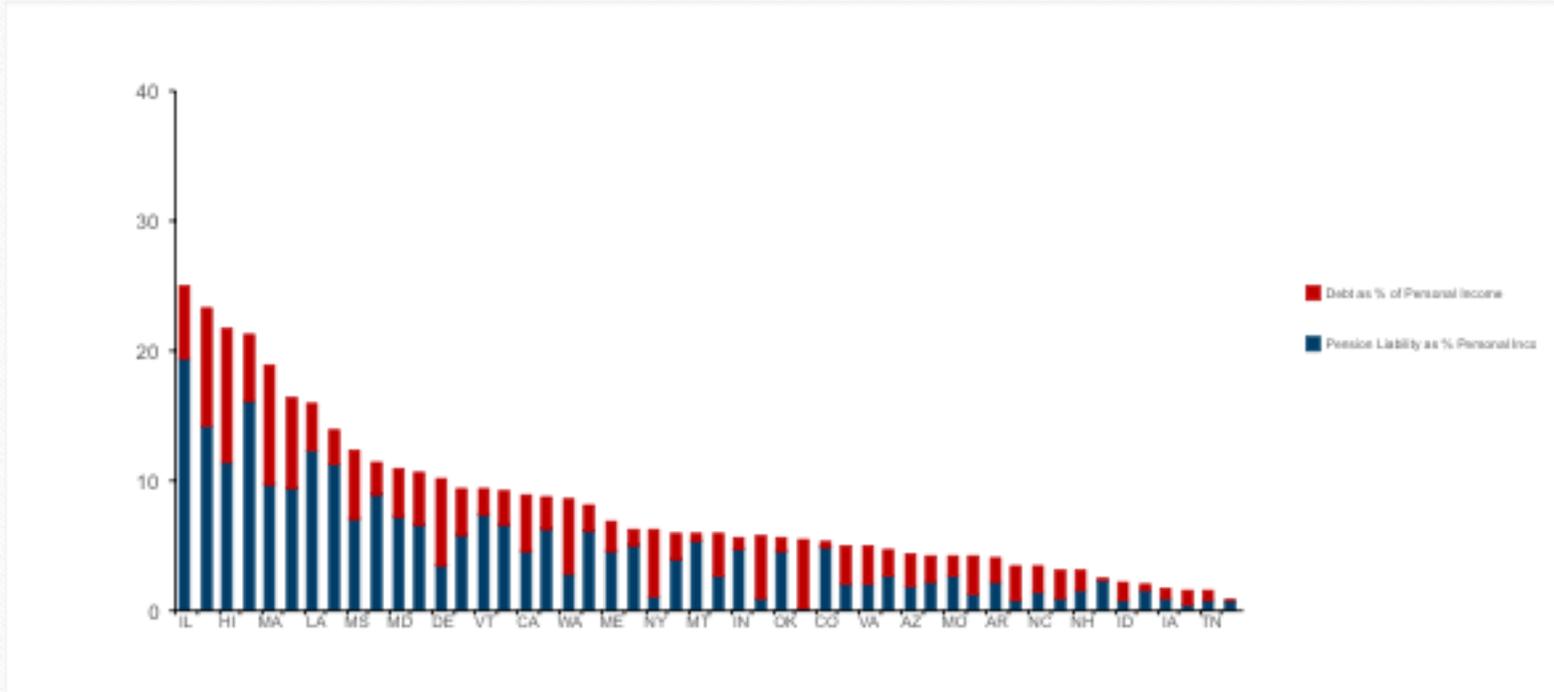
# Are Changes to the Investor Base Raising

<b>Holders of Municipal Securities and Loans</b> Millions of dollars outstanding at end of period; not seasonally adjusted							
Sector	2006		2011		2015Q1		Δ2006-2015
	Value	Percent	Value	Percent	Value	Percent	
Household Sector	1,635,637	51%	1,805,739	49%	1,554,427	42%	-5.0%
Mutual Funds/ETFs	825,240	26%	989,641	27%	1,046,636	28%	26.8%
Money Market Mutual Funds	391,970	12%	357,318	10%	273,503	7%	-30.2%
Long-dated Mutual Funds	343,924	11%	541,172	15%	672,511	18%	95.5%
Closed-end Funds	89,346	3%	82,504	2%	84,621	2%	-5.3%
Municipal ETFs	-	0%	8,647	0%	16,001	0%	
Insurance	371,796	12%	452,769	12%	468,374	13%	26.0%
Property and Casualty	335,223	11%	330,998	9%	320,250	9%	-4.5%
Life Insurance	36,573	1%	121,771	3%	148,124	4%	305.0%
U.S.-Chartered Depository Institutions	190,065	6%	297,250	8%	465,146	13%	144.7%
State and Local Government Retirement Funds	1,638	0%	1,680	0%	1,978	0%	20.8%
Government-sponsored Enterprises	36,091	1%	21,049	1%	9,915	0%	-72.5%
Brokers and Dealers	50,868	2%	30,899	1%	20,629	1%	-59.4%
Rest of the World	34,364	1%	72,370	2%	83,663	2%	143.5%
Other	43,593	1%	47,968	1%	43,280	1%	-0.7%
<b>Total Assets</b>	<b>3,189,292</b>	<b>100%</b>	<b>3,719,365</b>	<b>100%</b>	<b>3,694,048</b>	<b>100%</b>	<b>15.8%</b>

Source: Board of Governors of the Federal Reserve System and Wells Fargo Securities, LLC

*Note: Household Sector data includes hedge funds.*

# Which Metrics Should Serve As Red Flags?



## What Factors Could Signal An Imminent Transition?

- **Unsustainable growth in the debt burden or fixed costs**
- **Difficulty achieving structurally balanced and/or timely budgets**
- **Escalating pattern of mismanagement among public office-holders**
- **Partisan gridlock and/or widening partisan divide**
- **Persistently low liquidity and reliance on inter-fund borrowing**
- **Sizable growth in unfunded pension liability & ARC-to-budget**
- **Demographic pressure coupled with taxpayer exhaustion**

## How Will Rating Agencies Manage the Process?

- A credit is a candidate for the “Ba” category when default is unlikely but risks have become elevated due to: (a) poor liquidity (b) substantial negative fund balances (c) unsustainable fixed cost trends (d) declining tax base or economy and (e) limited ability to withstand external shocks
- A credit is a candidate for “B” category when default risk is under 50% but recoveries are expected to be 95% or higher. “B” rated credits are marked by (a) tenuous market access (b) narrow liquidity (c) dwindling corrective options and (c) a risk of service level insolvency.

Source: Moody's Investors Service

# What's the Market's Record of Forecasting Rating Changes?

10-year CA State GO Spreads & Moody's rating actions (March 1995 thru December 2015)

State spread in bps



Source: MMD, Moody's Investors Service, UBS as of Dec. 31, 2015

# What Do Speculative Grade Ratings Communicate?

## Historical Corporate Default Experience

Rating	Year 1	Year 2	Year 3	Year 4	Year 5
A	.06%	.20%	.43%	.67%	.95%
Baa	.17%	.50%	.89%	1.36%	1.85%
Ba	1.11%	3.06%	5.36%	7.81%	10.03%
B	3.89%	9.23%	14.66%	19.43%	23.79%
Caa-C	15.78%	26.82%	35.56%	42.55%	48.56%

Source: Moody's Investors Service

# Q & A

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