



Northeastern
U N I V E R S I T Y

Is There a Silver Lining?

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Agenda

- Economic challenges
- Potential impacts for agencies
- Silver lining?

1. Economic challenges

- Recession
- Deflation
- Financial crisis

Recession through Q3

- Although NBER pegged the onset to December, 2007 GDP grew for 2 quarters
 - Payrolls cut by 2 million in last year, more coming
 - Residential construction down 23.6%
 - GDP drop more recent
 - Manufacturing construction up 53.7%
 - Office construction up 8.9%
 - Factory orders down 5.1% in October



Real GDP growth is measured at seasonally adjusted annual rates.

U.S. Bureau of Economic Analysis

Things will get worse

- Payrolls down by 1.6 million in just last 3 months of '08
- GDP drop was 3.8% in Q4
- Next couple of quarters looking bad

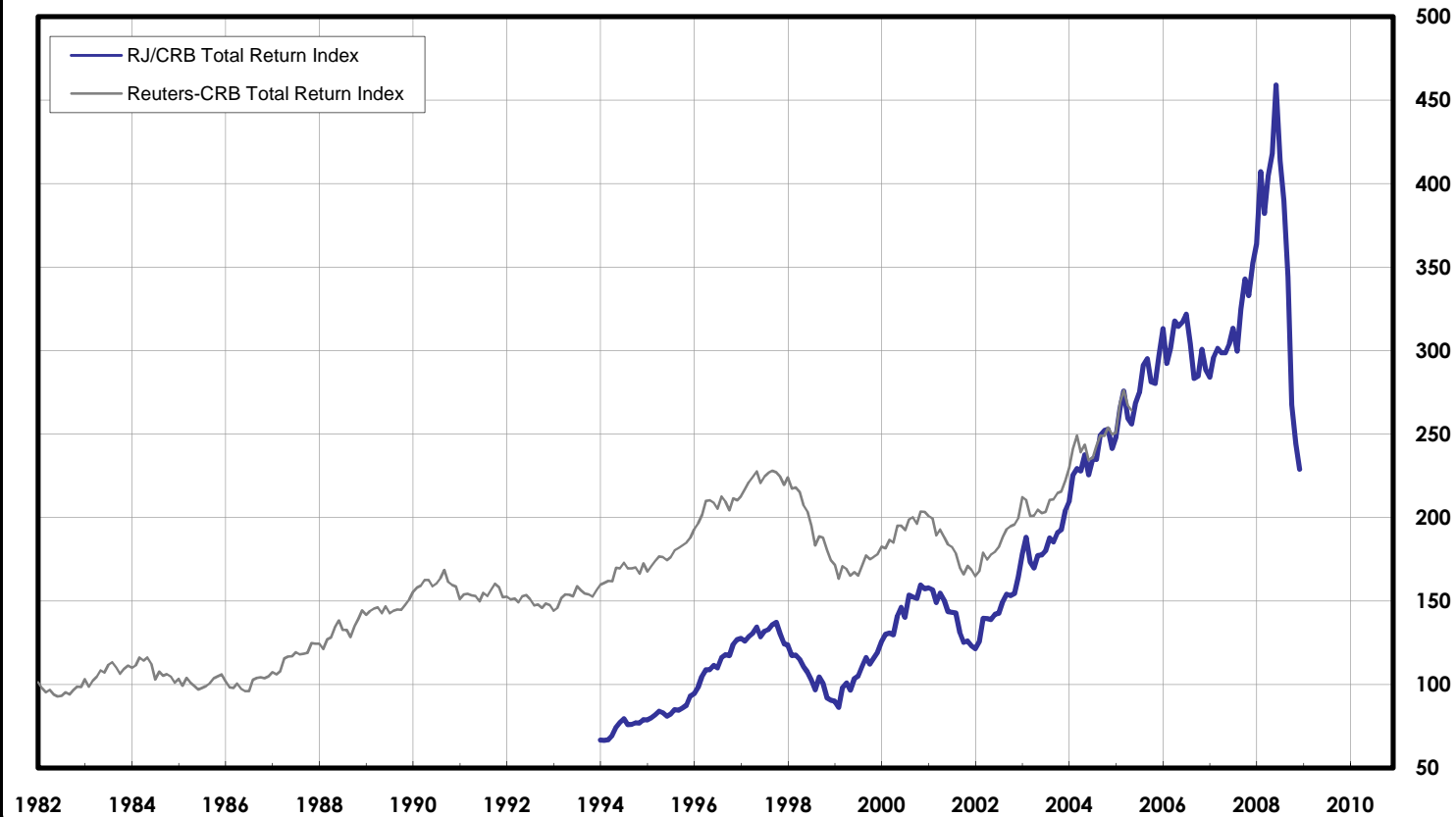
Deflation

- CPI dropped last 3 months
- Sign of a deep recession

Reuters/Jefferies CRB® Total Return Index

January 1982 - December 2008 (monthly close)

© Reuters
Index Value



Financial Crisis

- Has been more apparent for a longer time
- Credit contraction, lack of liquidity
- Investors seeking safety of treasuries
- Credit quality of general obligation bonds becoming suspect
 - State tax revenues down 2.6% last quarter
- Muni yields now higher than treasuries
- Muni issuance down 41%

Has improved in January

- Highest issuance of munis since Lehmann
- Muni rates have come back down

2. Impacts

- Revenues
- Costs
- Capital projects
- Financings

Survey Responses

| | |
|---|-----|
| Revenues | |
| Decreased Hook ups | 30% |
| Decreased Usage Demand | 30% |
| Inability to Raise Prices | 50% |
| Increased Bad Debt | 30% |
| Decreased Interest Income | 20% |
| Decreased Government Support | 10% |
| | |
| Costs | |
| Easing Salaries/Hiring | 10% |
| Decreasing costs from suppliers and vendors | 10% |
| Cutting or freezing payroll | 30% |
| Underfunded Pension Liability | 20% |
| Deferring Maintenance | 10% |
| | |
| Capital Projects | |
| Delaying projects | 70% |
| | |
| Balance Sheet | |
| Difficult to refinance | 70% |

Revenues

- Decrease in hook-ups
 - Seen already in residential
 - Manufacturing just starting
- Decrease in demand
 - Can be quick, e.g., Michigan
- Increase in bad debt
- Decrease in investment interest
- Little help from states or cities
- Tough climate to raise rates


Costs

- Some costs will go down
 - Wages, supplies, vendors
- Hard to cut when so much is fixed to capacity and not demand
 - 20% is payroll
 - 40% is depreciation
- Hiring freezes versus layoffs
- Pension underfunding
- Deferred maintenance



Water, Sewage, and Other Systems Employment


| Year | Employees | Payroll (1000s) |
|-------------|------------------|------------------------|
| 2000 | 39,555 | \$1,362,126 |
| 2001 | 43,148 | \$1,603,457 |
| 2002 | 45,595 | \$1,674,162 |
| 2003 | 44,704 | \$1,700,636 |
| 2004 | 42,670 | \$1,688,606 |
| 2005 | 41,986 | \$1,723,170 |





Capital Expenditures - Utilities

| Year | Expenditures (millions) |
|------|-------------------------|
| 2001 | \$82,823 |
| 2002 | \$65,502 |
| 2003 | \$54,569 |
| 2004 | \$50,409 |
| 2005 | \$58,032 |
| 2006 | \$69,967 |



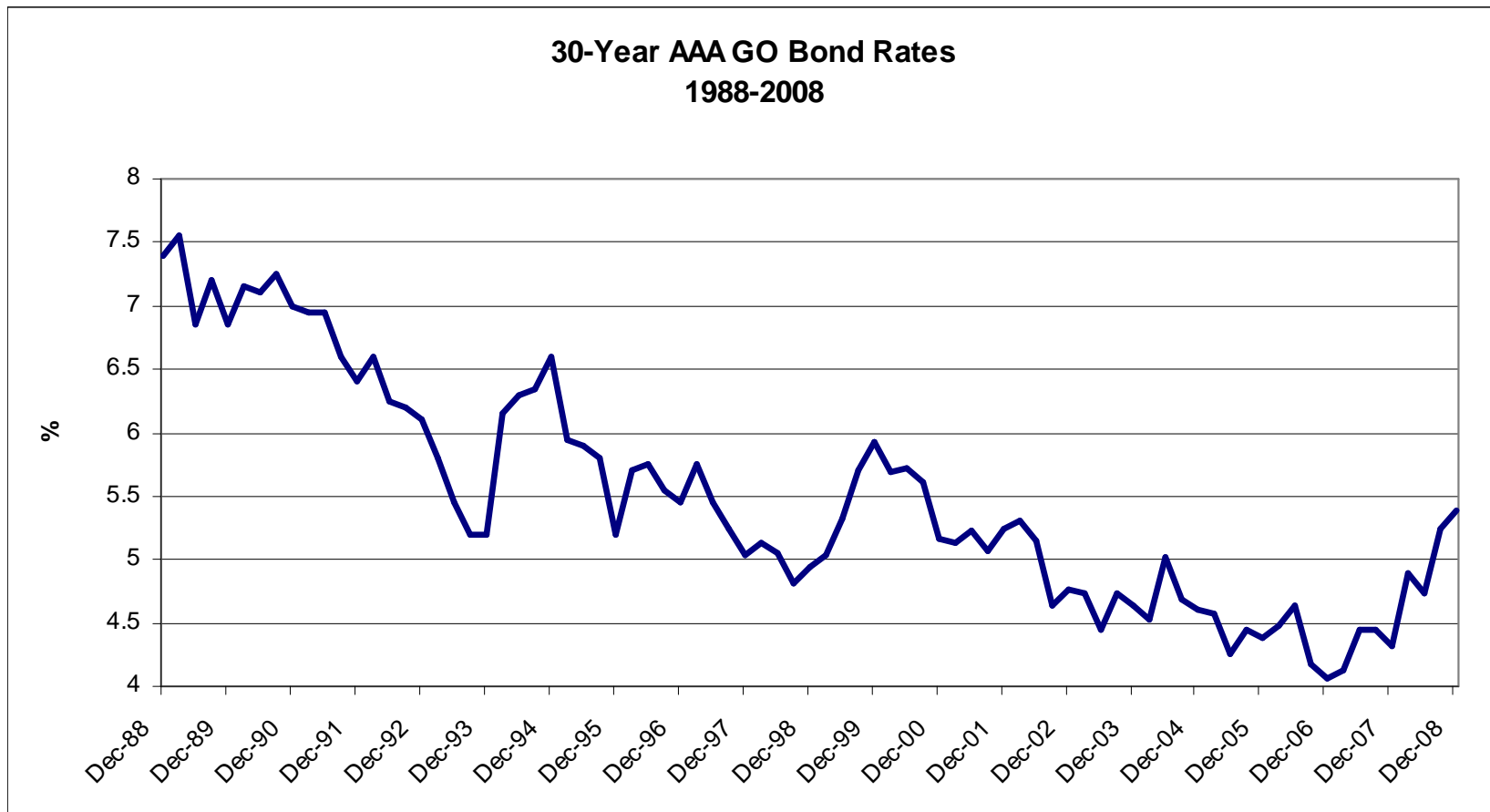
Financings

- Increased time, effort and cost in issuing debt
- Long term debt
 - Shorter terms, higher rates, no insurance
 - Higher debt service costs
- Short term debt
 - Fewer banks and investors
 - Rates may have returned to normal
- People holding off when they can

3. Silver Lining?

- Are these the 'good old days'?
- What is your reference point?
- Rates are not going down to recent lows but they are historically good.

Long-term interest rates have risen...



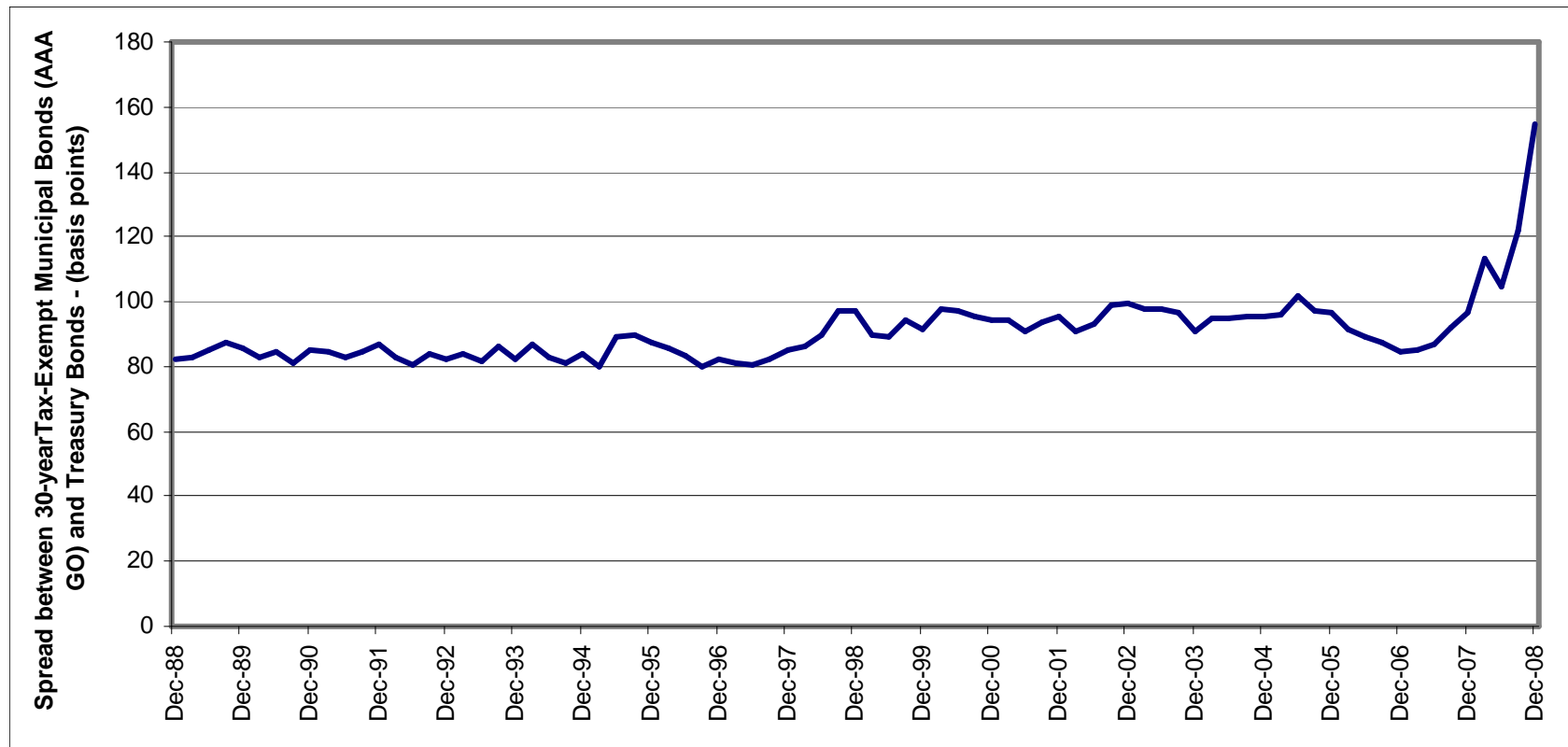
Source: Thomson Financial, Municipal Market Data

Treasuries v. Munis

- Currently inverted but coming back
- Treasuries increasing and will continue to as federal spending needs to be financed
- Munis decreasing as institutions come back in

...and credit spreads between municipals and treasuries may attract new buyers

Spread between 30-year Tax-Exempt Municipal Bonds (AAA GO) and Treasury Bonds
1988 – 2008



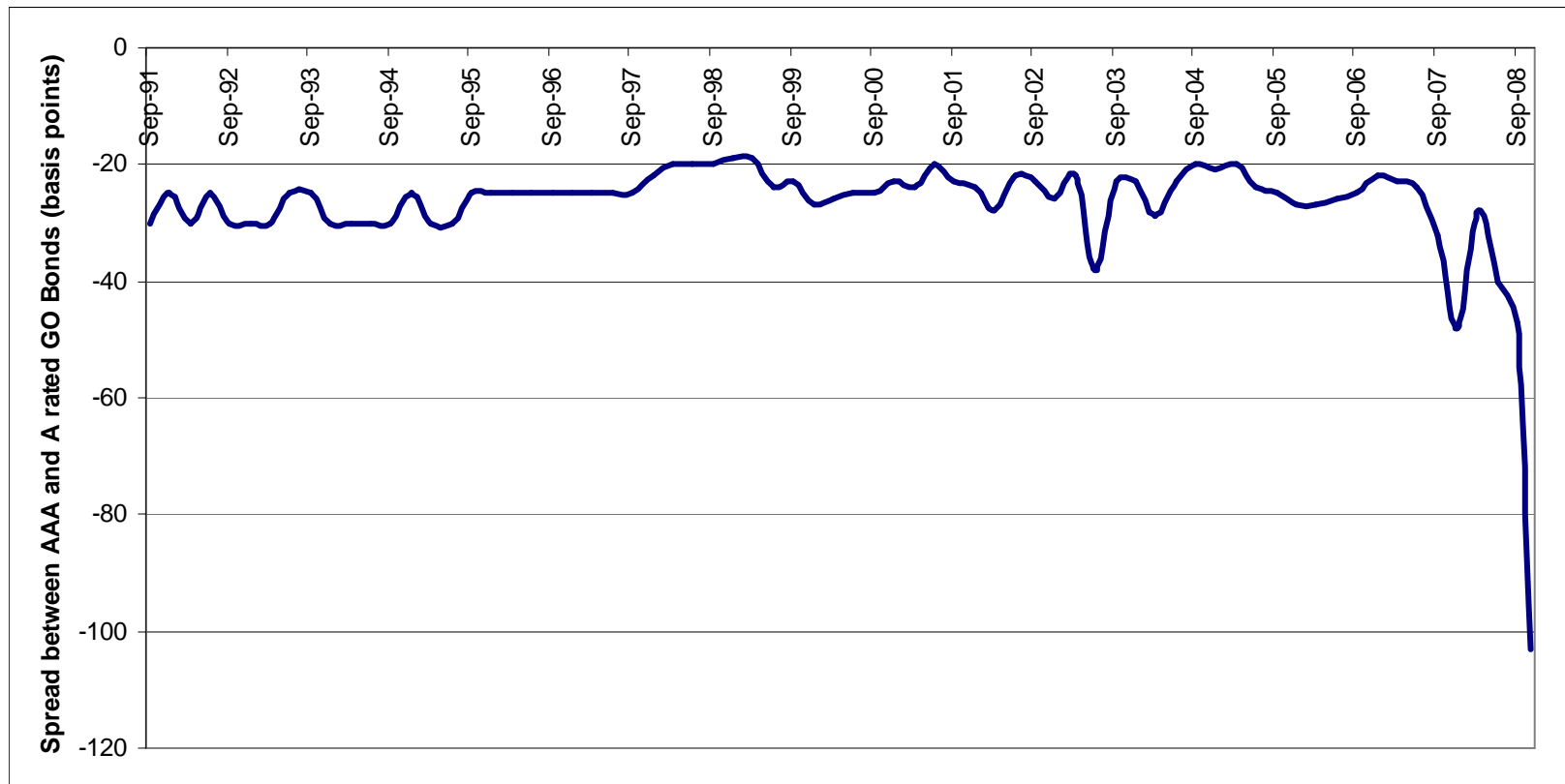
Source: Thomson Financial, Municipal Market Data

Munis becoming more attractive

- After tax returns are high
- Still a flight to quality as spreads between low and high rated have grown
- Very few deals below AA

Municipal credit spreads have widened significantly

Spread between AAA and A rated GO Bonds



Source: Thomson Financial, Municipal Market Data

Future?

- Feds have taken real rates negative
- Stimulus is inflationary
- Rates not likely to be lower
- Need investors

Stimulus

- \$4, 6 or 10 billion for water
- Run through State Revolving Funds
- Loans versus grants

Best of Times?

- What happens after this huge spending for the next couple of years?
- Now we may be getting availability with \$7 billion and the guaranties
- Rates are reasonable
- Costs of labor and supplies will remain low
- For those who are doing capital improvements, construction may be cheaper