"Do Ratings Agencies Create Fiscal Discipline?"

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"Do Ratings Agencies Create Fiscal Discipline?" Focus on Chicago

Putting Muni Ratings into Perspective:

- Role of a rating agency? evaluator, policeman or prophet?
- Foundational basis of rating

 Default history of security
 class combined with strength
 of economic base.
- Emphasis on standard methodology and key metrics -- using the right metrics at the right time?

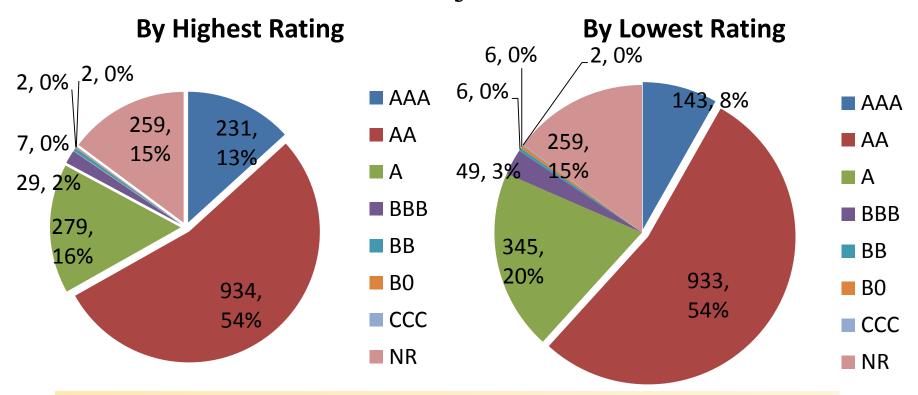
Chicago – Formidable Economic Base



Breakdown of City Ratings –

(Using Highest and Lowest Rating by Three Major Agencies)

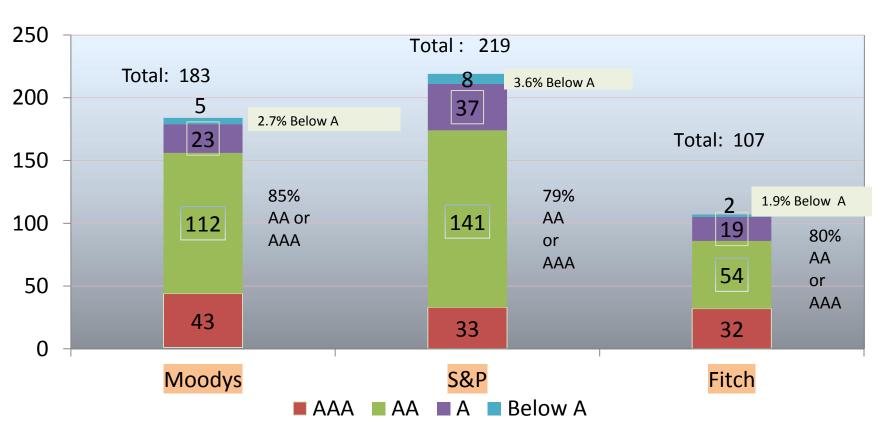
AA Ratings Dominate



54% of all 1743 cities have a AA rating; 63% of all ratings assigned excluding non-rated are AA. 79% of all assigned ratings excluding non-rated are either AA or AAA. Recalibration in 2010 pulled up Ratings.

Source: Merritt Research Services, LLC as of 3/28/14. There are 1743 cities included in analysis.

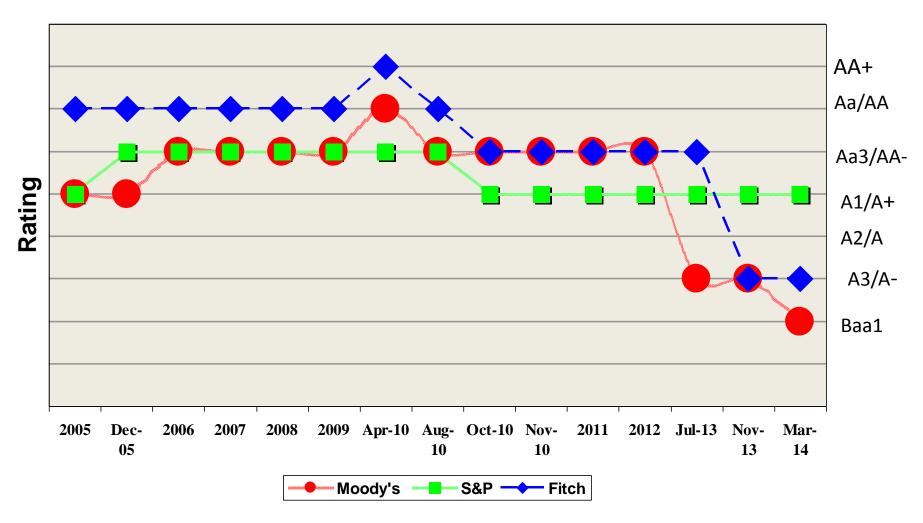
Rating Distribution by Three Major Agencies for Large Cities (over 100,000 Persons)



Source: Merritt Research Services, LLC based on ratings applying to cities with population of 100,000 or more provided by agencies as of March 28, 2014.

Chicago GO Ratings History Since 2005

Three Notch Downgrade Took Place In 2013. Moody's & Fitch Recalibrated In 2010



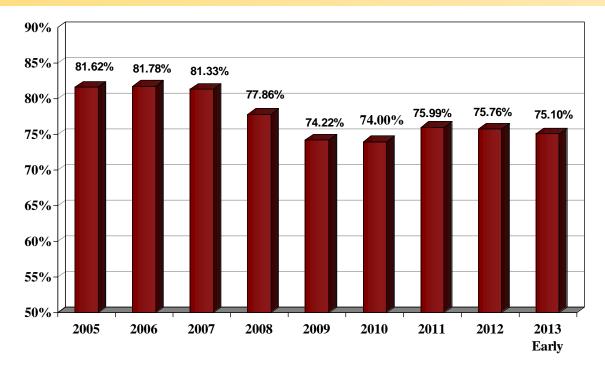
Chicago vs. the Rating Agencies

- Focusing on the Achilles Heel pensions
- Taking a look at other Rating Agency criteria
- Correlations with other key metrics:
 - Financial cushions
 - Net position

City Total Pension Funded Ratio

Annual Medians: FY 2005 – 2013 (Preliminary)

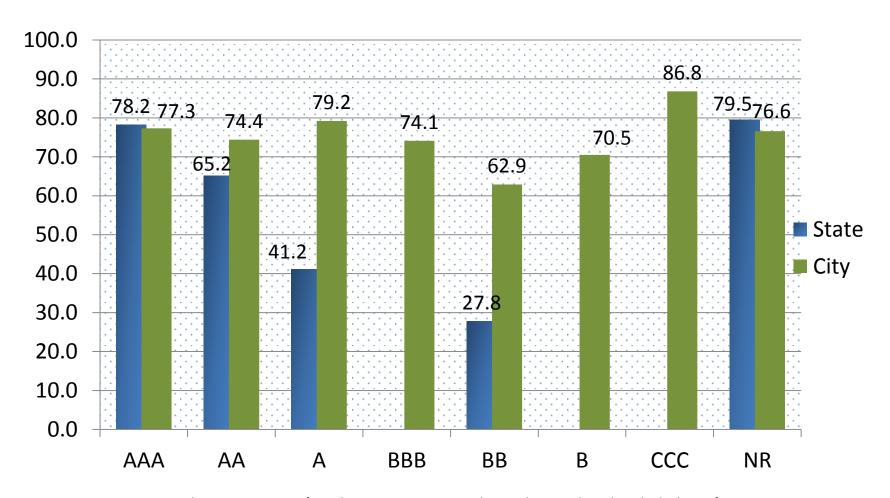
Steady funding ratio shown since recent low point in 2010. Coming GASB changes likely to depress ratios when new rules are implemented. Funding Ratio for 2013 may not be indicative of trend due to a smaller sample size received to date from early reporters.



Source: Merritt Research Services, LLC. Data as of April 11, 2014. Pension data reflects the following cities reporting by year: 571 in 2005; 718 in 2006; 864 in 2007; 1045 in 2008; 1129 in 2009; 1188 in 2010; 1116 in 2011; 723 in 2012 and 201 in 2013.

Pension Funding Ratio by Rating Bracket For States and Cities (FY 2012)

High Correlation for States - Not for Cities

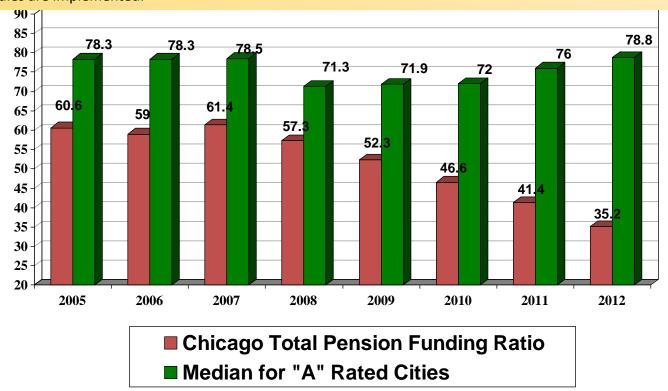


Source: Merritt Research Services, LLC as of April 11, 2014. Rating Bracket medians are based on the highest of the most recent non-credit enhanced ratings by Moody's, S&P or Fitch. Number of Credits used: 55 states and territories and 1566 cities.

Pension Funding Ratio (%) ---

Chicago vs Combined Rating Agency "A" Rating Medians for Annual Medians: FY 2005 – 2012

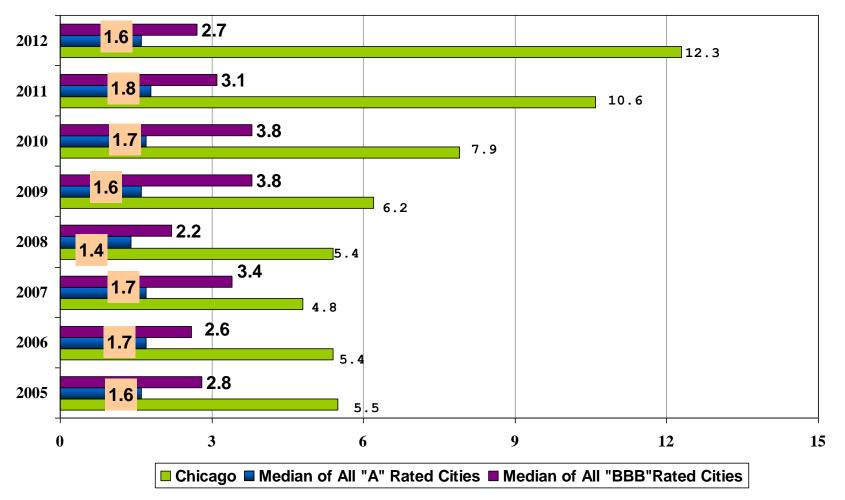
Chicago's Falling Funding ratios have falling sharply since 2007. "A" Rated City Medians Declined in 2008 but have been showing Gradual Recovery. Coming GASB changes likely to depress ratios when new rules are implemented.



Source: Merritt Research Services, LLC. Median for "A" Rated Cities includes all cities rated by Moody's, S&P and Fitch using the highest of the three ratings for each city to compute the benchmark. Rating Bracket medians are based on the highest of the most recent non-credit enhanced ratings by Moody's, S&P or Fitch.

Total Liabilities: Net Direct Debt + Unfunded Pension Liability as a Percent of Full Market Value

Chicago Combined Liability Has Been More Than Triple "A" Rated Cities Comparison With "A" And "BBB" Bracket Rating Medians (2005-2012)

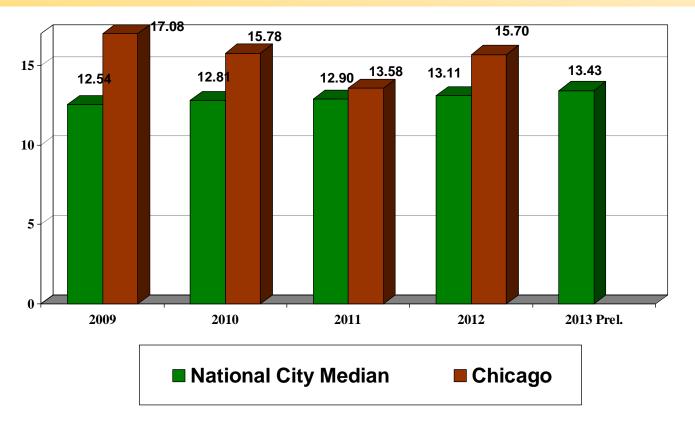


Source: Merritt Research Services, LLC data. Median for "A" Rated Cities includes all cities rated by Moody's, S&P and Fitch using the highest of the three ratings for each city to compute the benchmark. Rating Bracket medians are based on the highest of the most recent non-credit enhanced ratings by Moody's, S&P or Fitch.

Squeezing Governmental Expenditures: Chicago Vs. National City Annual Median: Current Debt Service + Contribution To Pension & OPEB To Total Primary Government Expenditures FY 2009 – 2013

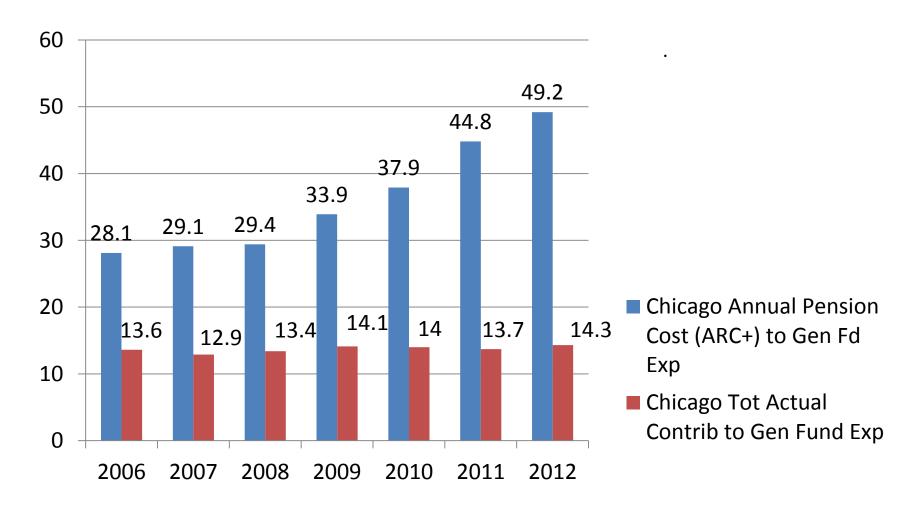
(Preliminary -- Median For 2013 Represents A Smaller Sample Of Early Reporters)

Important ratio to watch because, as it rises, it squeezes discretionary budget items.



Source: Merritt Research Services, LLC. As of April 7, 2014. Not all cities are required to contribute to pensions or OPEB. Number reporting numbers in each year: In 2013, early reporters represented only 394 cities. In 2012, 1347 cities reported; 1504 in 2011; 1400 in 2010 and 1125 in 2009. Primary Government Expenditures, includes Governmental Activities and Business Enterprises.

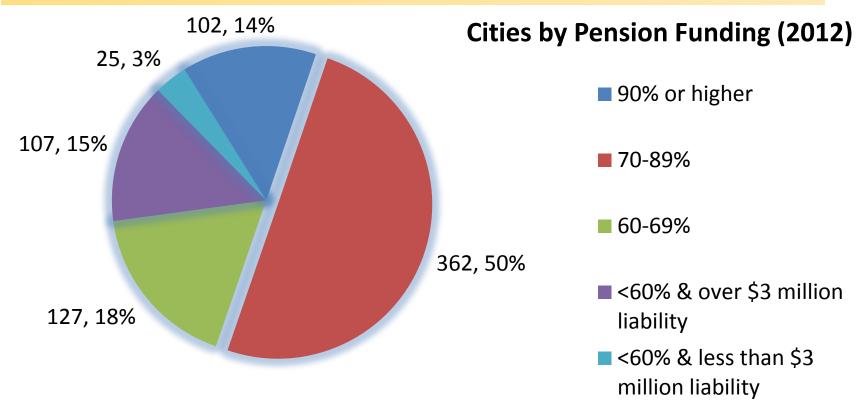
Chicago Pension Burden: Relative to General Fund **The Gap Widens**: Chicago Actual Pension Contributions as a % of the General Fund and Annual (Actuarial) Pension Cost as % of Gen Fund 2006-2012



Source: Merritt Research Services, LLC. Data.

City Pensions – Breakdown by 2012 by Pension % Funding Status

Out of 723 reporting cities, 107 cities (15% of total) funded less than 60% and had at least \$3 million in unfunded liabilities and 64% had a funding ratio of 70% or more.



 Source: Merritt Research Services, LLC Data as of April 11, 2014. Total number of cities reported with single employer plans -- 723.

Sample Cities with Low Pension Funding Ratios 2012

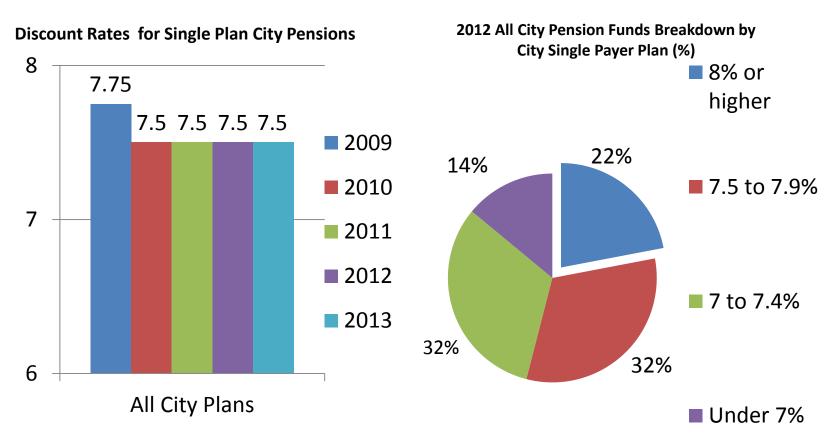
(Plan Liabilities of over \$200 million)

City	Moody's/S&P/ Fitch	Population	Funding Ratio (%)	Total Valuation Of Pension Unfunded Liabilities (\$Mil)
Portland, OR	Aaa/NR/NR	593,893	1*	2653.8
Springfield, MA	A2/AA/NR	153,552	29	657.1
Chicago, IL	Baa1/A+/A-	2,714,856	35	19,352
Philadelphia, PA	A2/A+/A-	1,538,567	46	5,313.1
New Orleans LA	A3/BBB+/A-	369,250	47	604.2
Omaha, NE	Aa1/AA+/NR	421,570	47	813.7

^{*}Portland Pension Plan is funded by a continuing annual special property tax levy to cover annual pension requirements.

Pension Fund Discount Rates for All Cities with Single Employer Plans (2008-2013 Early Reporters)

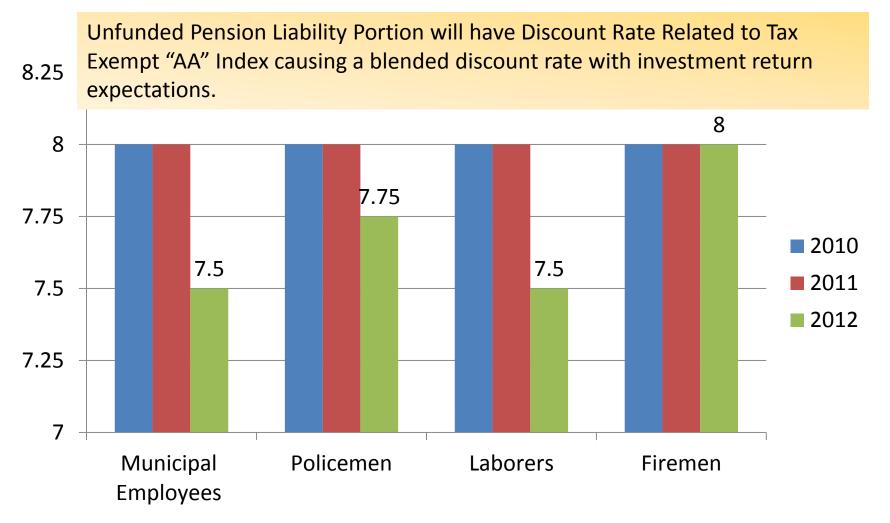
Median Discount Rate for City Pension Funds is 7.5%. New GASB Rules Requires Discount Rate to be Reset for Unfunded Portion at a "AA" Tax Exempt Index Rate. Change is effective after June 15, 2014.



Source: Merritt Research Services, LLC. Data as of 4/11/14. Plans reporting to date for 2013; 302in 2013; 981 in 2012; 1641 in 2011; 1800 in 2010 and 1482 in 2009

15

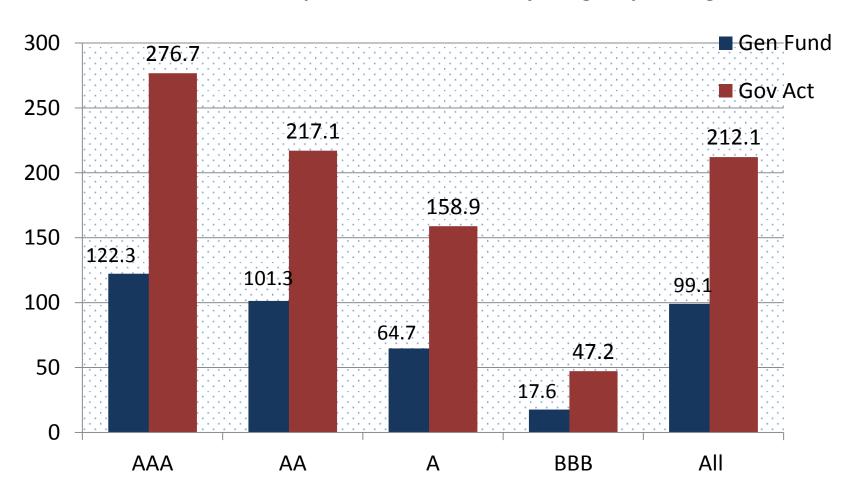
Chicago Pension Discount Rates New Discount Likely to Be Adverse Impact Factor for GASB Pension Ratios



Source: Merritt Research Services, LLC derived from Chicago CAFRs (2010-2012)

Gen Fund Days Cash on Hand by Investment Grade Rating Bracket For Cities (FY 2012)

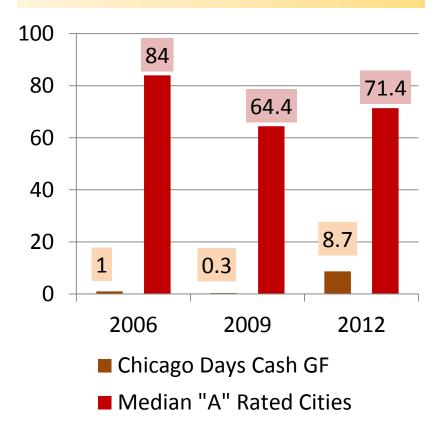
Breakdown by Lowest of Three Major Agency Ratings



Source: Merritt Research Services, LLC. Credits placed based on highest rating by Moody's, S&P or Fitch. Number of Credits used: 1743 cities in total 2012 analysis. Rating Bracket medians are based on the highest of the most recent non-credit enhanced ratings by Moody's, S&P or Fitch. Credits either rated non-investment grade or those that were not rated by any of the rating agencies were excluded from this chart.

Other Key Comparative Ratios: Days Cash Compared to Cities Rated "A" (2006, 2009 and 2012)

Chicago Days Cash on Hand (General Fund vs. "A" Rated Medians



Chicago Days Cash on Hand (Gov. Activities) vs. "A" Rated Medians



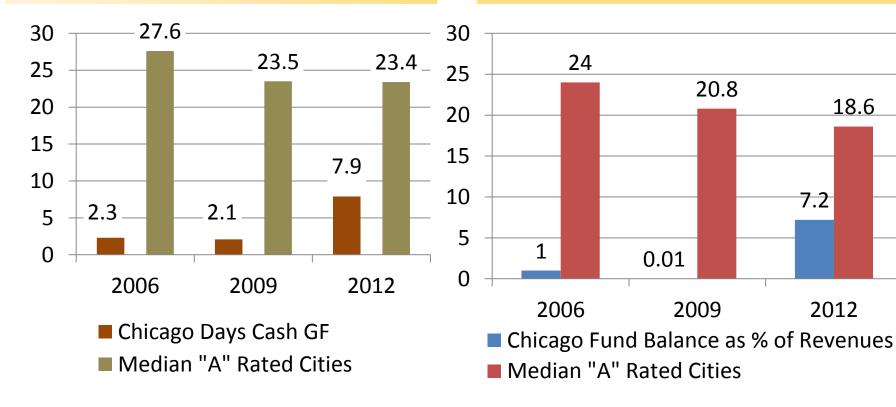
Source: Merritt research services, LLC. Data as of 4/4/14. Rating bracket medians are based on the highest of the most recent non-credit enhanced ratings by Moody's, S&P or Fitch.

Key Comparative Ratios: Fund Balance

Chicago Compared to Cities Rated "A" (2006, 2009 and 2012)

Total General Fund Balance as % of Revenues vs. "A" Rated Medians





recent non-credit enhanced ratings by Moody's, S&P or Fitch.

18.6

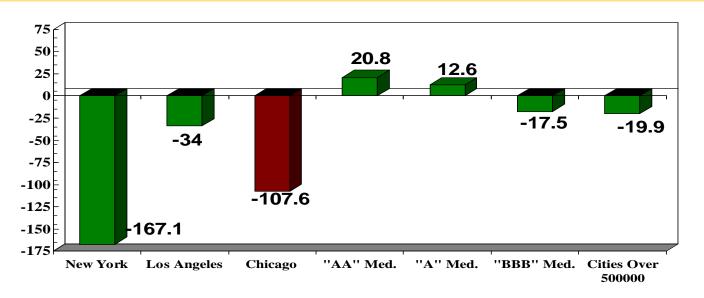
7.2

2012

Key Comparative Ratios:

Unrestricted Net Assets as % of Governmental Expenditures – Chicago vs. Other Cities and Rating Medians FY 2012

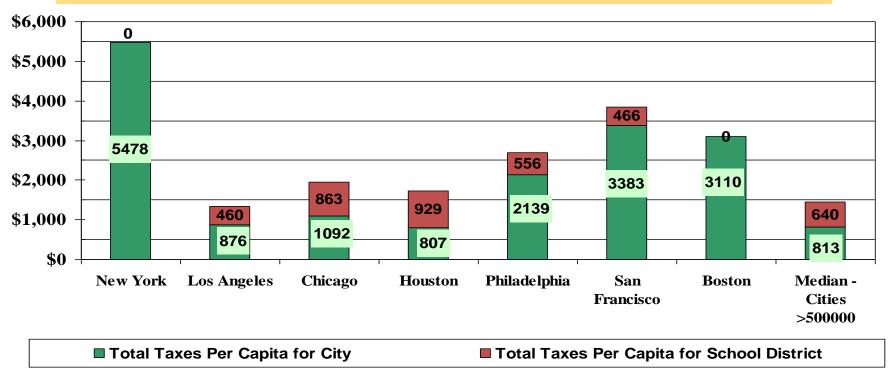
Unrestricted Net Assets of represents "Net Position" of a City, including all governmental assets and infrastructure as well as all liabilities. It is comparable to a net worth of a company.



Source: Merritt Research Services, LLC. Data as of 4/4/14. Cities over 500,000 include 34. Unrestricted assets, also called net position of city, including all governmental assets, including infrastructure net of depreciation, and all liabilities, including debt, pensions, OPEB and carryover deficits. Rating Bracket medians are based on the highest of the most recent non-credit enhanced ratings by Moody's, S&P or Fitch.

Key Comparative Ratios: Total Tax Revenue (Gov. Activities) Per Capita Chicago vs. Other Cities over 500,000 Population

The median total Governmental Activities Total Tax Revenue Per Capita for the nations' largest cities over 500,000 population is \$813. While the combined city/school Total Tax Revenue Per Capita for these cities \$1453, the combined total for Chicago and School Board for FY 2012 was \$1955.



Source: *Merritt Research Services, LLC.* Data as of 4/11/14 includes 34 Cities over 500,000. Total represent most taxes for the most recent fiscal year audit available (FY 2013 and FY 2012) for the cities shown.

The Carrot and the Stick

 Future borrowing costs determined by rating as well as market perceptions

 Recent S&P 30 yr. Index spread between AA and A rated credits around 30 basis points*

 Recent S&P 30 yr. Index spread between A and BBB rated credits around 90 basis points*

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^{*} S&P indexes based on levels available on April 15, 2014. Actual yield differences on individual bonds can vary significantly at any point in time relative to a rating band index depending on wide variety of factors, including state tax exemption, coupon, call and unique credit characteristics.

"Do Ratings Agencies Create Fiscal Discipline?" Summary & Considerations:

- City ratings concentrated in AA and AAA brackets
- Role primarily of evaluator not policeman...until....
- Opinions Follow Methodology
 - Starting point begins with breadth and strength of economy and default history of class.
 - Key ratios don't always correlate with rating brackets or "perceived risks"
 - Methodology subject to change and recalibration.
- Rating agencies more prone to become "de facto" fiscal policymakers when credits on the margins.
- Focus is more on "here and now" conditions
- Better approach would be to distinguish credits with long term structural vulnerabilities earlier in rating assignment

Notes and Disclosures

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The analysis is based on sources of the data that may include, but are not limited to, some or all of the following: State and Local Governments Comprehensive Annual Financial Reports, U.S. Census Bureau, Bureau of Labor Statistics, Bureau of Economic Affairs, and other third party data research, issuer-derived documents and news media reports. Merritt believes the data to be reliable but does not make any representations as to its accuracy or completeness. Any commentary prepared and presented by Merritt Research is intended for informational purposes only and should not be solely relied on for investment decisions. There are no assurances that any predicted results discussed herein will actually occur.

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