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Moody's approach to rating local government GO debt in Ohio

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Expertise

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Engagement

Meaningful interactions across multiple channels between our analysts and market participants.

Agenda

1. GO Methodology
2. Moody’s Rating Process
3. Ohio Credit Trends
4. Q&A

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Moody’s GO Methodology for US Local Governments

What's a Moody's Credit Rating?

- A forward-looking opinion of the relative risk of financial obligations.
- We rate securities "through the economic cycle," or with a long-term focus.
- Ratings are assigned to specific securities (GO, lease, water and sewer revenue, sales tax, etc.)
- Ratings signal both the likelihood of default (failure to pay principal and interest on time) and expected loss given default.

Moody's Long-Term Rating Scale

Global Long-Term Rating Scale

Aaa	Obligations rated Aaa are judged to be of the highest quality, subject to the lowest level of credit risk.
Aa	Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.
A	Obligations rated A are judged to be upper-medium grade and are subject to low credit risk.
Baa	Obligations rated Baa are judged to be medium-grade and subject to moderate credit risk and as such may possess certain speculative characteristics.
Ba	Obligations rated Ba are judged to be speculative and are subject to substantial credit risk.
B	Obligations rated B are considered speculative and are subject to high credit risk.
Caa	Obligations rated Caa are judged to be speculative of poor standing and are subject to very high credit risk.
Ca	Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest.
C	Obligations rated C are the lowest rated and are typically in default, with little prospect for recovery of principal or interest.

Note: Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category. Additionally, a "(hyb)" indicator is appended to all ratings of hybrid securities issued by banks, insurers, finance companies, and securities firms.*

GO Methodology for US Local Governments

Factors and Sub-Factors	Scorecard Weights
Factor 1: Economy and Tax Base	**30%**
Full Value (market value of taxable property)	10%
Full Value per Capita	10%
Median Family Income	10%
Factor 2: Finances	**30%**
Fund Balance as % of Operating Revenue	10%
5-Year Dollar Change in Fund Balance as % of Revenues	5%
Cash Balance as % of Revenues	10%
5-Year Dollar Change in Cash Balance as % of Revenues	5%
Factor 3: Management and Governance	**20%**
Institutional Framework	10%
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures	10%
Factor 4: Debt and Pensions	**20%**
Net Direct Debt / Full Value	5%
Net Direct Debt / Operating Revenue	5%
3-Year Average of Moody's Adjusted Net Pension Liability / Full Value	5%
3-Year Average of Moody's Adjusted Net Pension Liability / Operating Revenues	5%

GO Methodology Factors

Factor 1: Economy and Tax Base (30%)

- Full Value (10%) measures market value of taxable property.
- Full Value Per Capita (10%) measures resources per resident.
- Median Family Income (10%) measures socioeconomic characteristics of the base.
- Other Considerations: Institutional presence; regional economic center; economic concentration; unemployment levels; poverty levels; other.

	Very Strong	*Strong*	*Moderate*	*Weak*	*Poor*	*Very Poor*
	Aaa	**Aa**	**A**	**Baa**	**Ba**	**B & Below**
ECONOMY AND TAX BASE (30%)						
Tax Base Size: Full Value (in 000s)	> $12B	$12B ≥ n > $1.4B	$1.4B ≥ n > $240M	$240M ≥ n > $120M	$120M ≥ n > $60M	≤ $60M
Full Value Per Capita	> $150,000	$150,000 ≥ n > $65,000	$65,000 ≥ n > $35,000	$35,000 ≥ n > $20,000	$20,000 ≥ n > $10,000	≤ $10,000
Socioeconomic Indices: MFI	> 150% of US median	150% to 90% of US median	90% to 75% of US median	75% to 50% of US median	50% to 40% of US median	≤ 40% of US median

GO Methodology Factors

Factor 2: Finances (30%)

» Fund Balance (15%) measures financial resources, relative to operating revenue, both at a point in time and over time.

» Cash Balance (15%) measures liquidity, relative to operating revenue, both at a point in time and over time.

» Other Considerations: Revenue structure; contingent liabilities; other.

	Very Strong	*Strong*	*Moderate*	*Weak*	*Poor*	*Very Poor*
	Aaa	**Aa**	**A**	**Baa**	**Ba**	**B & Below**
FINANCES (30%)						
Fund Balance as % of Revenues	> 30.0% > 25.0% for School Districts	30.0% ≥ n > 15.0% 25.0% ≥ n > 10.0% for SD	15.0% ≥ n > 5.0% 10.0% ≥ n > 2.5% for SD	5.0% ≥ n > 0.0% 2.5% ≥ n > 0.0% for SD	0.0% ≥ n > -2.5% 0.0% ≥ n > -2.5% for SD	≤ -2.5% ≤ -2.5% for SD
5-Year Dollar Change in Fund Balance as % of Revenues	> 25.0%	25.0% ≥ n > 10.0%	10.0% ≥ n > 0.0%	0.0% ≥ n > -10.0%	-10.0% ≥ n > -18.0%	≤ -18.0%
Cash Balance as % of Revenues	> 25.0% > 10.0% for School Districts	25.0% ≥ n > 10.0% 10.0% ≥ n > 5.0% for SD	10.0% ≥ n > 5.0% 5.0% ≥ n > 2.5% for SD	5.0% ≥ n > 0.0% 2.5% ≥ n > 0.0% for SD	0.0% ≥ n > -2.5% 0.0% ≥ n > -2.5% for SD	≤ -2.5% ≤ -2.5% for SD
5-Year Dollar Change in Cash Balance as % of Revenues	> 25.0%	25.0% ≥ n > 10.0%	10.0% ≥ n > 0.0%	0.0% ≥ n > -10.0%	-10.0% ≥ n > -18.0%	≤ -18.0%

GO Methodology Factors

Factor 3: Management and Governance (20%)

- Institutional Framework (10%) measures the sector's legal ability to match revenues and expenditures.
- Operating History (10%) compares revenues and expenditures over time.
- Other Considerations: State oversight or support; unusually strong or weak management or planning; other.

	Very Strong	*Strong*	*Moderate*	*Weak*	*Poor*	*Very Poor*
	Aaa	**Aa**	**A**	**Baa**	**Ba**	**B & Below**
MANAGEMENT AND GOVERNANCE (20%)						
Institutional Framework	Very strong legal ability to match resources with spending	Strong legal ability to match resources with spending	Moderate legal ability to match resources with spending	Limited legal ability to match resources with spending	Poor legal ability to match resources with spending	Very poor or no legal ability to match resources with spending
Operating History: 5-Year Avg of Op Rev / Op Expend	> 1.05x	1.05x ≥ n > 1.02x	1.02x ≥ n > 0.98x	0.98x ≥ n > 0.95x	0.95x ≥ n > 0.92x	≤ 0.92x

GO Methodology Factors

Factor 4: Debt and Pensions (20%)

» Debt (10%) measures long-term debt outstanding relative to tax base value and operating revenue.

» Pensions (10%) measures Moody's Adjusted Net Pension Liability (ANPL) relative to tax base value and operating revenue.

» Other Considerations: Unusual security features; unusual risk posed by debt and pension structure; fixed cost burden; overlapping debt and pension levels; history of missed debt service payments; other.

	Very Strong	*Strong*	*Moderate*	*Weak*	*Poor*	*Very Poor*
	Aaa	**Aa**	**A**	**Baa**	**Ba**	**B & Below**
DEBT AND PENSIONS (20%)						
Net Direct Debt / Full Value	< 0.75%	0.75% ≤ n < 1.75%	1.75% ≤ n < 4.00%	4.00% ≤ n < 10.00%	10.00% ≤ n < 15.00%	> 15.00%
Net Direct Debt / Operating Revenues	< 0.33x	0.33x ≤ n < 0.67x	0.67x ≤ n < 3.00x	3.00x ≤ n < 5.00x	5.00x ≤ n < 7.00x	> 7.00x
3-Year Average ANPL/ Full Value	< 0.90%	0.90% ≤ n < 2.10%	2.10% ≤ n < 4.80%	4.80% ≤ n < 12.00%	12.00% ≤ n < 18.00%	> 18.00%
3-Year Average ANPL/ Op Revenues	< 0.40x	0.40x ≤ n < 0.80x	0.80x ≤ n < 3.60x	3.60x ≤ n < 6.00x	6.00x ≤ n < 8.40x	> 8.40x

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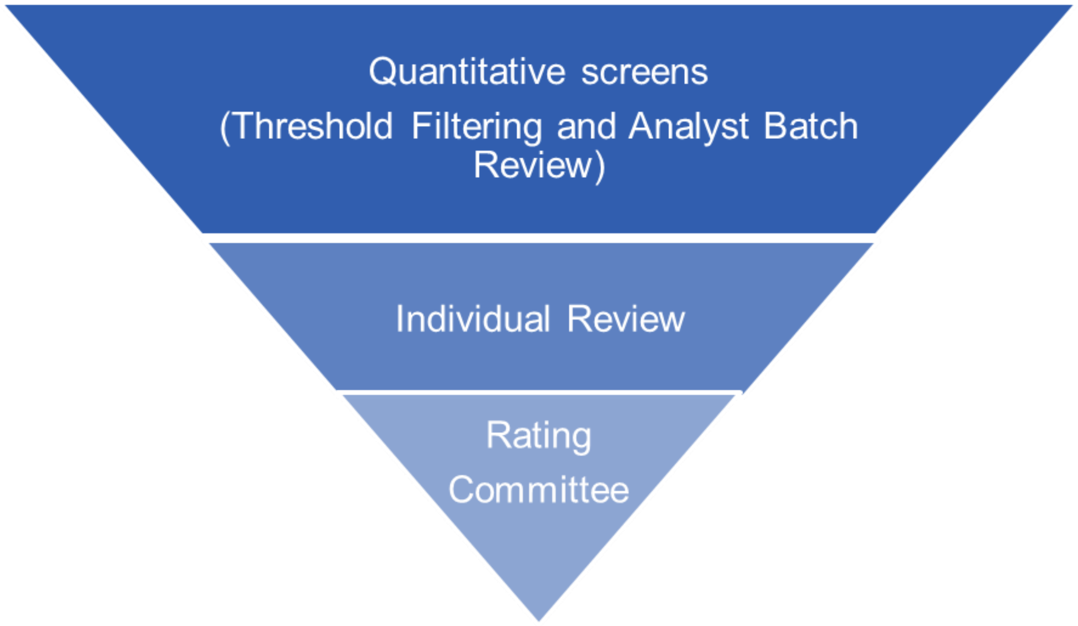
Moody's Rating Process

Moody’s Rating Process: New Sales

- Step 1: Assignment of the lead analyst upon notification of the sale.
- Step 2: Selection of a methodology based on the security of the debt.
- Step 3: Analysis of sale-related documents; legal information; tax base data; census information; audited financial data; debt and pension information; operating budgets; and capital improvement plans
- Step 4: Discussions between the Moody’s analyst(s) and the issuer.
- Step 5: Moody’s rating committee determines the rating outcome.
- Step 6: The lead analyst communicates the rating outcome to the issuer and, after the issuer’s review of the draft report, publishes the rating and the credit opinion report.

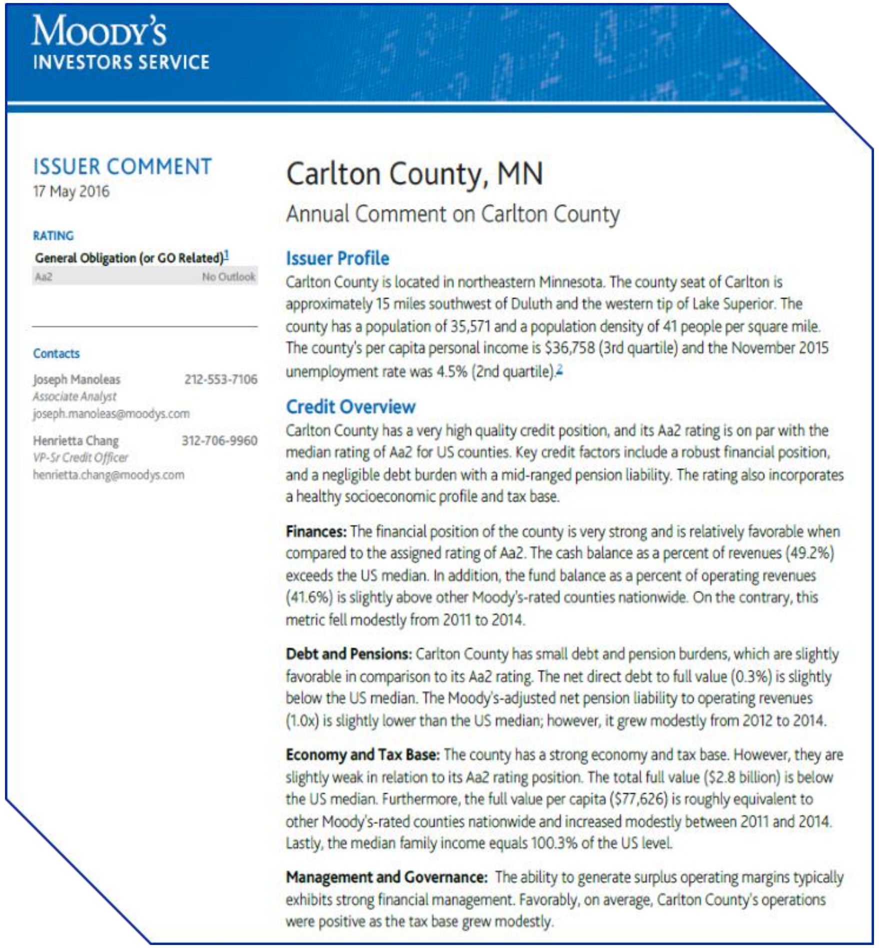
Monitoring and Management of Ratings

- » Once assigned, we monitor ratings continually. Many US local governments do not issue debt regularly, so we review their ratings outside of the sales calendar to ensure that they remain appropriately positioned.
- » The surveillance process involves multiple screens and a rating committee, as appropriate. Moody's monitors each rating at least once a year.
- » Usually triggered by receipt of annual audited financial statements.



Annual Issuer Comment Reports (AICR)

- The AICR provides recent information related to credit factors for rated US cities (including townships and villages), counties, school districts and municipal utilities.
- The reports present a summary and assessment of key economic, demographic, financial and operating information considered for each issuer drawn from Moody's databases in the context of Moody's ratings methodology. The reports do not announce rating actions.
- The AICR fills a market gap for thousands of cities, counties and school districts with outstanding Moody's rated GO debt and provide a research update in the context of our key factors considered in our rating methodology.



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ISSUER COMMENT
17 May 2016

RATING

General Obligation (or GO Related)[1]	
Aa2	No Outlook

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Carlton County, MN

Annual Comment on Carlton County

Issuer Profile

Carlton County is located in northeastern Minnesota. The county seat of Carlton is approximately 15 miles southwest of Duluth and the western tip of Lake Superior. The county has a population of 35,571 and a population density of 41 people per square mile. The county's per capita personal income is $36,758 (3rd quartile) and the November 2015 unemployment rate was 4.5% (2nd quartile).[2]

Credit Overview

Carlton County has a very high quality credit position, and its Aa2 rating is on par with the median rating of Aa2 for US counties. Key credit factors include a robust financial position, and a negligible debt burden with a mid-ranged pension liability. The rating also incorporates a healthy socioeconomic profile and tax base.

Finances: The financial position of the county is very strong and is relatively favorable when compared to the assigned rating of Aa2. The cash balance as a percent of revenues (49.2%) exceeds the US median. In addition, the fund balance as a percent of operating revenues (41.6%) is slightly above other Moody's-rated counties nationwide. On the contrary, this metric fell modestly from 2011 to 2014.

Debt and Pensions: Carlton County has small debt and pension burdens, which are slightly favorable in comparison to its Aa2 rating. The net direct debt to full value (0.3%) is slightly below the US median. The Moody's-adjusted net pension liability to operating revenues (1.0x) is slightly lower than the US median; however, it grew modestly from 2012 to 2014.

Economy and Tax Base: The county has a strong economy and tax base. However, they are slightly weak in relation to its Aa2 rating position. The total full value ($2.8 billion) is below the US median. Furthermore, the full value per capita ($77,626) is roughly equivalent to other Moody's-rated counties nationwide and increased modestly between 2011 and 2014. Lastly, the median family income equals 100.3% of the US level.

Management and Governance: The ability to generate surplus operating margins typically exhibits strong financial management. Favorably, on average, Carlton County's operations were positive as the tax base grew modestly.

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Ohio Credit Trends

State credit outlook

- » Ohio's stable outlook reflects proactive management and low fixed costs that support budgetary flexibility despite relatively weak demographic trends.

- » FY19 revenue growth better than estimated
  - › Preliminary FY19 tax receipts increased 4.8% YOY, and were 2.9% ahead of estimate
  - › Budget for FY20-21 balances moderate spending growth with reasonable revenue growth

- » Financial flexibility supported by strong liquidity and moderate fixed costs
  - › Budget Stabilization Fund fully-funded at $2.7 billion, or 8.5% of general fund revenues
  - › State has substantial additional liquidity outside the general fund
  - › Fixed costs are below average at 7.4% of own-source revenues

Local government credit outlook

2019 outlook remains stable with tax revenue to grow modestly

NEGATIVE

What could change outlook to negative

» Property tax revenue growth below 2%

» Revenue growth outpaced by rising fixed costs or increased leverage

» Deteriorating economic conditions, rising unemployment, falling home values

STABLE

Drivers of the stable outlook

» Property tax revenue to grow a modest 2%-3%

» Total operating revenue to increase by approximately 3%, helping manage expenses

» Healthy fund balances, which provide a buffer against an economic slowdown or recession

POSITIVE

What could change outlook to positive

» Property tax revenue growth above 4%

» Lower fixed costs and reduced debt and pension leverage

» Improving economic conditions that are likely to boost local government revenue

Key Ohio economic and demographic themes

» Ohio’s economy is growing, but regional variations are emerging and leaving some areas behind.

» Regions with established service industries, growing populations, and a pipeline of working age residents will continue to lead the state’s growth.

» The Columbus and Cincinnati MSAs accounted for a bulk of the state’s job and population growth since 2010.

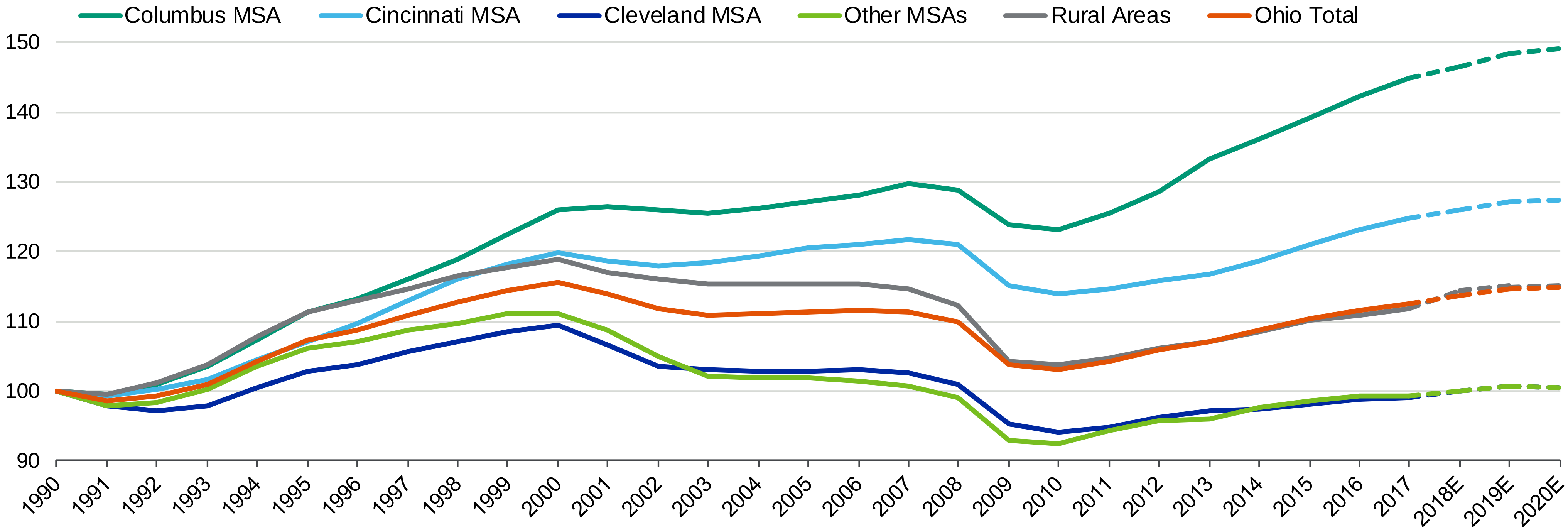
» Given Ohio’s reliance on income tax (cities) and sales tax (counties), economic performance and population trends are important revenue drivers.

» Close fiscal oversight and revenue raising flexibility are important credit considerations for Ohio local governments, especially those in areas with slow job growth and population loss.

Ohio's regional variations are growing

- Service-providing vs. manufacturing disparity is driving regional variations within Ohio.
- Columbus MSA is experiencing robust growth, followed by Cincinnati.
- Other MSAs, including Cleveland, and rural areas continue to underperform.

Change in Ohio Employment, Indexed to 1990



Source: U.S. Bureau of Labor Statistics, Moody's Investors Service

Ohio counties rely on sales taxes but hold strong reserves

- Ohio counties maintain higher reserves than their national peers, helping mitigate reliance on economically sensitive sales tax.
- Ohio counties tend to be more leveraged, primarily due to pension liabilities.
- Loss of Medicaid MCO sales tax revenue is expected to be manageable for most Ohio counties.

Medians

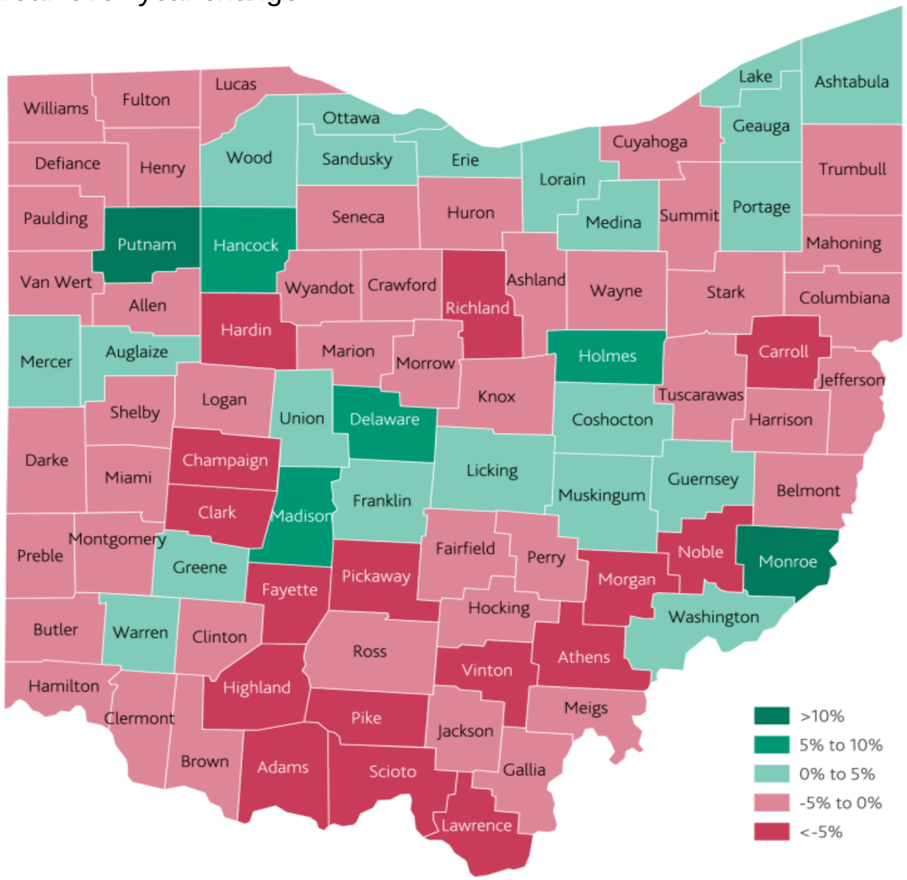
	US	Ohio
# of Ratings	871	59
Median GO Rating	Aa2	Aa2
Total Full Value	$7.7B	$5.2B
Median Family Income	$58,900	$56,200
Fund Balance as % of Revenues	40%	53%
Cash Balance as % of Revenues	38%	49%
ANPL / Revenues	1.4x	2.4x
Direct Debt / Revenues	0.6x	0.3x

Lost MCO tax resulted in another year of slow sales tax growth in FY18

- Statewide county sales tax collections fell 0.8% in 2018; 61 of Ohio's 88 counties experienced declines.
- The decline was driven by the exclusion of Medicaid MCO transactions from the sales tax base.
- The change went into effect in mid-2017 and fully realized in 2018. The state provided temporary assistance to help most counties make up for some of the lost revenue.
- On average, the Medicaid MCO tax accounted for 7.9% of county sales tax collections.
- 2019 collections should resume growth in line with each county's economic performance.

2018 sales tax declines driven by elimination of Medicaid MCO tax

Year-over-year change



Source: Ohio Department of Taxation; Moody's Investors Service

Revenues of Ohio cities influenced by economic and population trends

- Ohio cities maintain higher reserves than their national peers, helping mitigate reliance on economically sensitive income tax.
- Ohio cites tend to be much more leveraged, primarily due to pension liabilities.
- Labor market and population trends will continue to strongly influence income tax receipts.

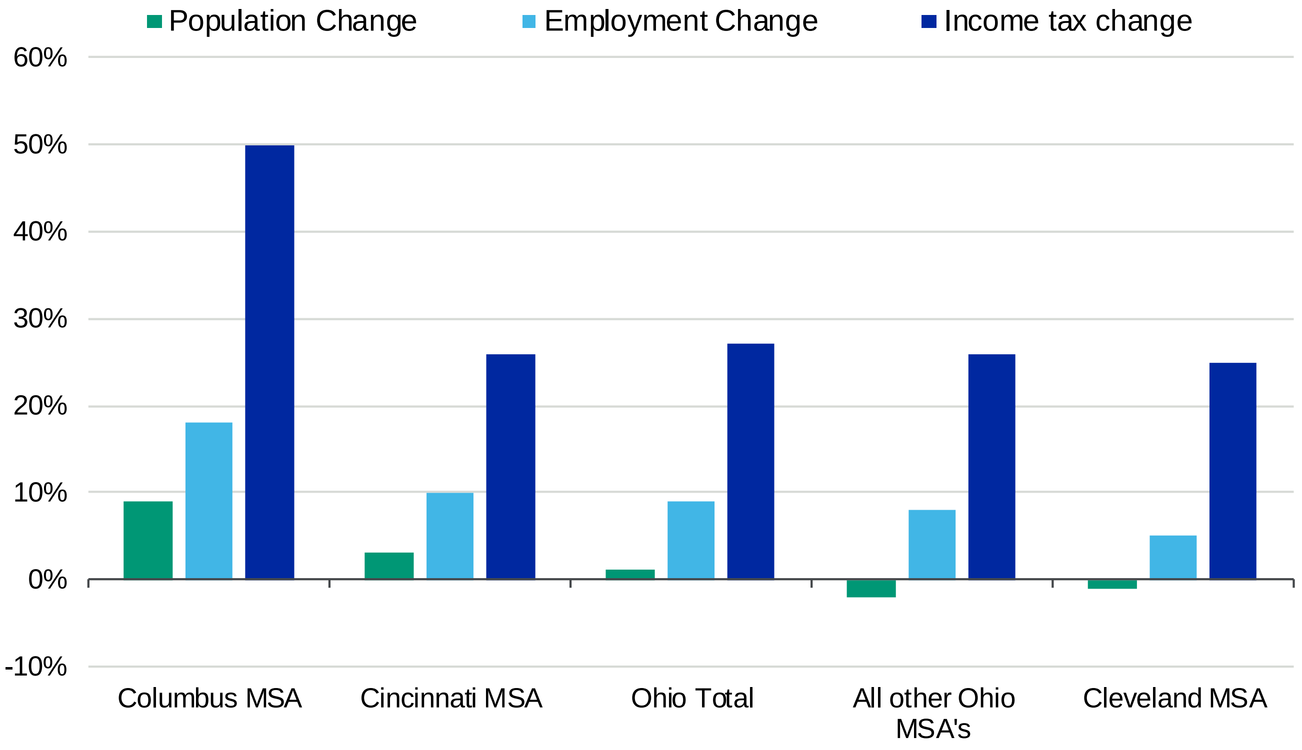
Medians

	US	**Ohio**
# of Ratings	2,671	193
Median GO Rating	Aa3	Aa3
Total Full Value	$2.1B	$1.1B
Median Family Income	$69,900	$63,300
Fund Balance as % of Revenues	40%	49%
Cash Balance as % of Revenues	40%	42%
ANPL / Revenues	1.5x	3.0x
Direct Debt / Revenues	0.9x	0.7x

Revenues of Ohio cities influenced by economic and population trends

- Population growth boosts revenues but can increase demand for public services.
- Declining population slows revenue growth, often necessitating rate increases and careful management.

<u>Percent change, 2010-17</u>



Source: US Bureau of Labor Statistics, US Census Bureau, Ohio Department of Taxation

Ohio schools increasingly reliant on voter support

- The median rating for Ohio schools (A1) is one notch below the national median (Aa3).
- The differential is partially due to Ohio's restrictive revenue raising environment, elevated leverage, and weak population trends.
- Voter support for new operating levies are increasingly important in maintaining or enhancing credit quality.

Medians

	US	Ohio
# of Ratings	3,356	314
Median GO Rating	Aa3	A1
Total Full Value	$2.1B	$1.0B
Median Family Income	$64,500	$61,100
Fund Balance as % of Revenues	26%	40%
Cash Balance as % of Revenues	27%	40%
ANPL / Revenues	1.5x	3.2x
Direct Debt / Revenues	0.7x	0.7x

Most Ohio schools face shrinking enrollment

» Ohio schools are competing for a shrinking pool of students.

» Statewide enrollment fell 5% between 2007-17.

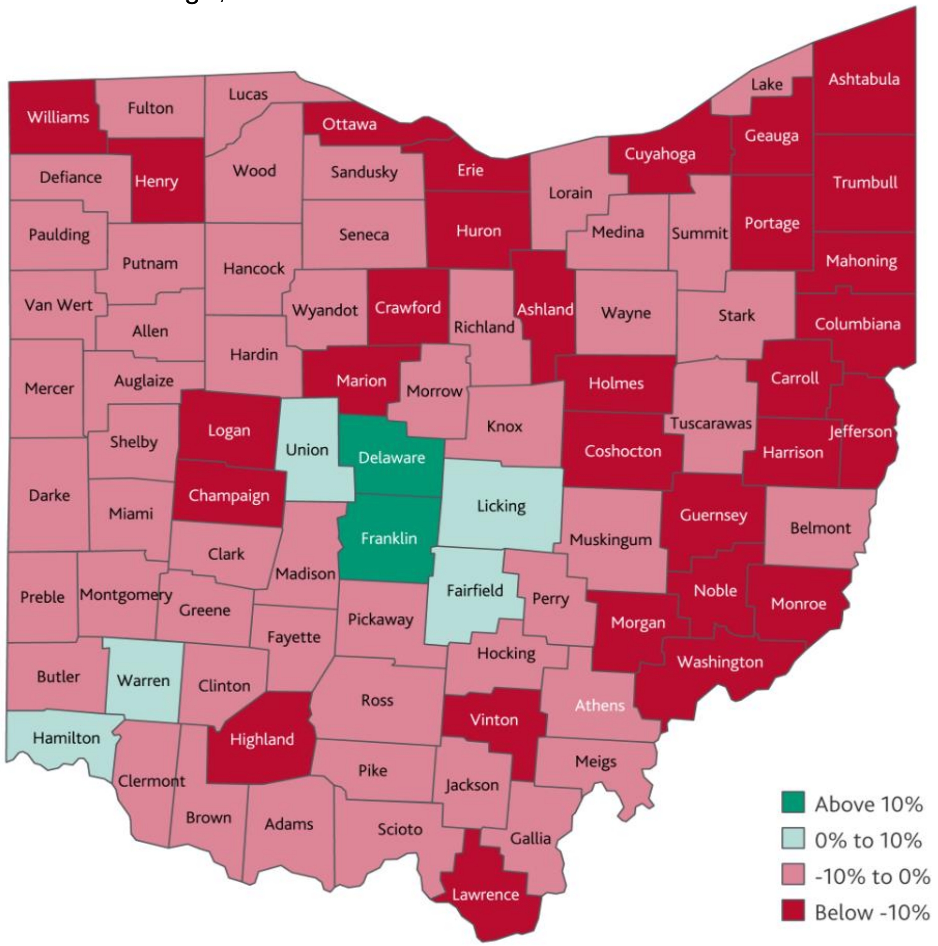
» 85% of Ohio school districts experienced enrollment declines between 2007-17.

» Enrollment is growing in just 7 of Ohio's 88 counties.

» With state aid fixed and total enrollment declining, levy elections are becoming increasingly important in maintaining stable finances.

Student enrollment continues to fall across Ohio

Percent Change, 2007-2017



Source: Ohio Department of Education

Debt-like nature of pensions restricts many, but not all benefit changes

Answers to 3 key legal questions over pension reforms can have significant credit ramifications for governments

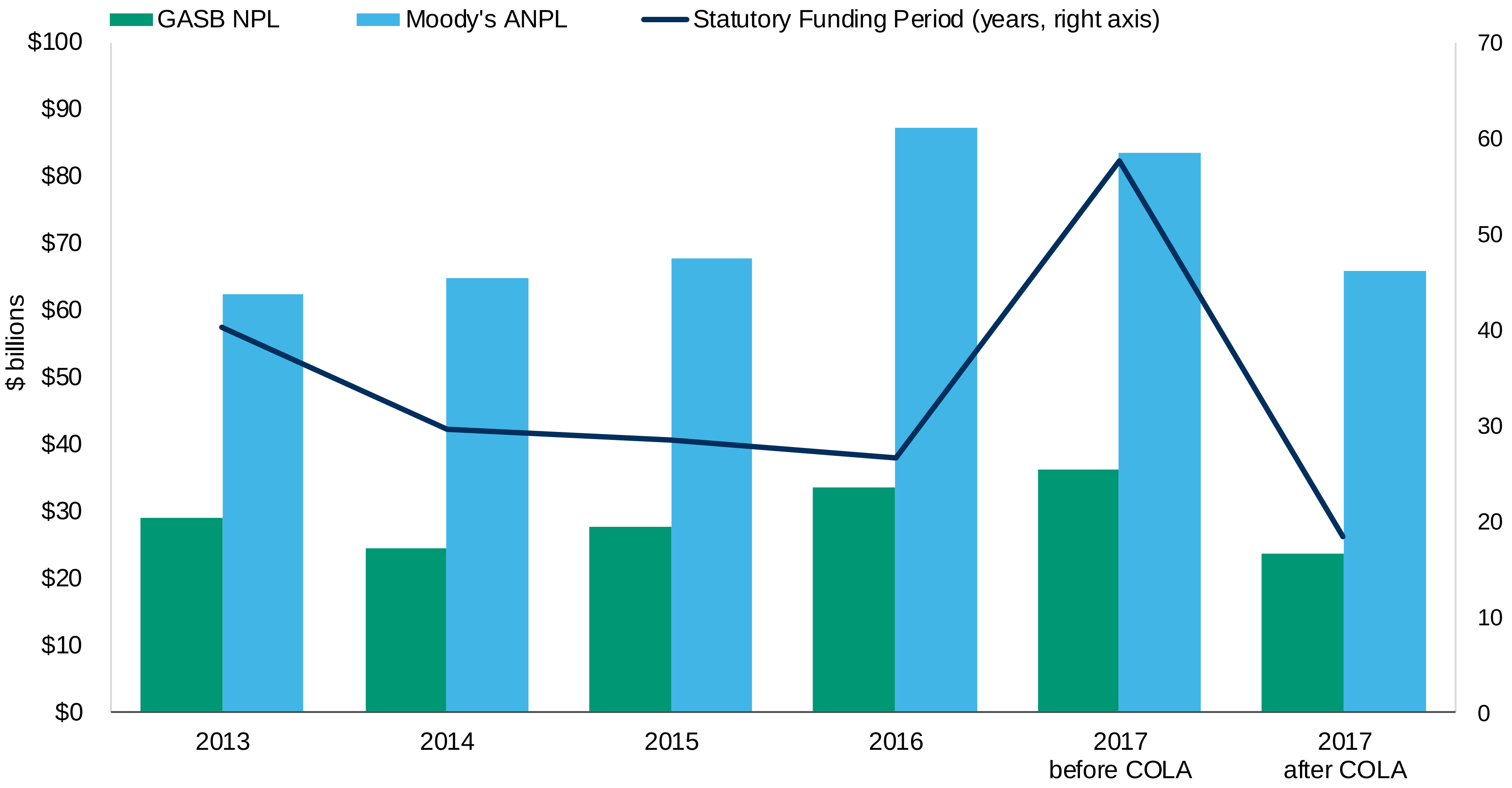
» Can benefits be prospectively changed for current employees?
  - Examples: Yes in Florida, No in Illinois

» Can cost-of-living adjustments be changed prospectively for current employees?
  - Examples: Yes in Oregon, No in New York

» Can cost-of-living adjustments be changed for current retirees?
  - Examples: Yes in Ohio, No in California

Despite high ANPL, benefit flexibility is significant

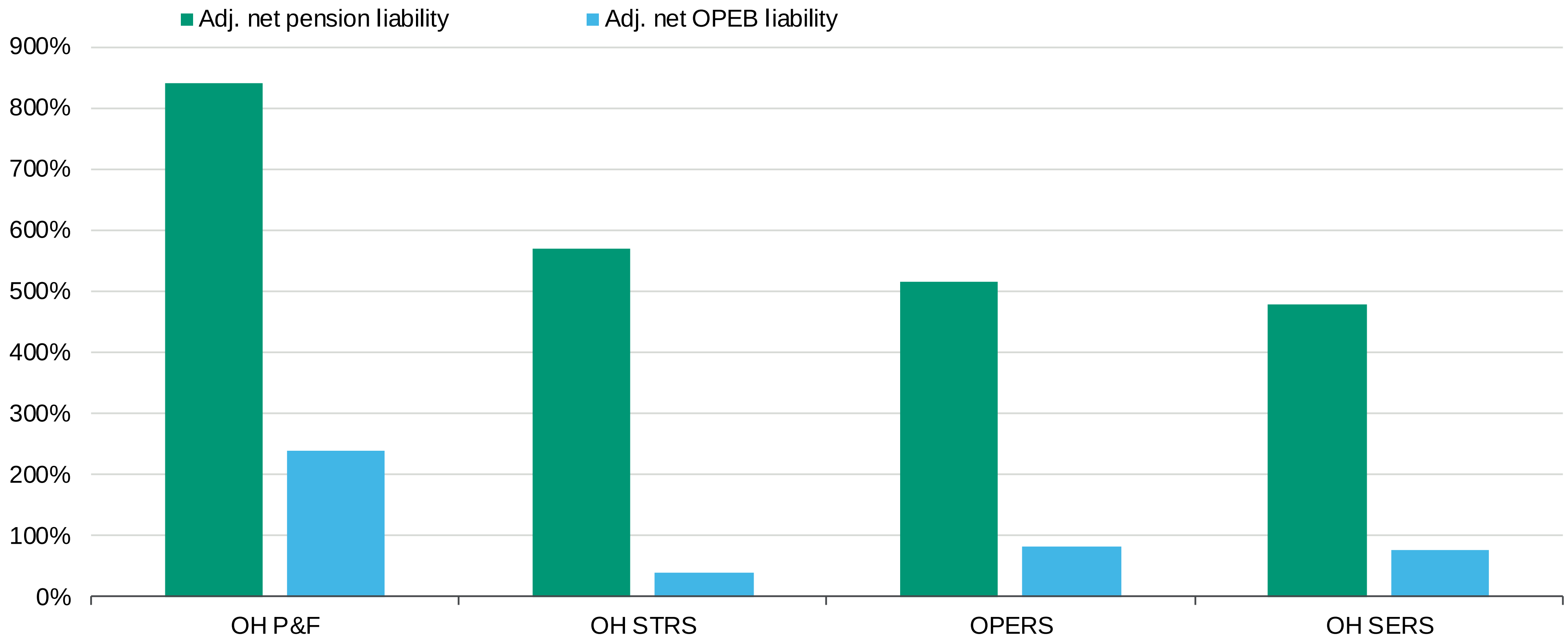
COLA suspension reduced STRS' unfunded liabilities and statutory funding period



Source: State Teachers Retirement System of Ohio, Moody's Investors Service

OPEB liabilities remain much smaller than pensions in Ohio's retirement systems

Moody's adjusted net liabilities, as % of covered payroll



Source: Plan financial statements, Moody's Investors Service

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Q&A

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