

Assessing Existing Local Government Fiscal Early Warning System through Four State
Case Studies: Colorado, Louisiana, Ohio and Pennsylvania

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I. ACKNOWLEDGEMENTS

This report was made possible by participation from the states of Pennsylvania, Ohio, Louisiana, and Colorado. These officials shared forthright explanations of the circumstances and structures of their respective fiscal early warning systems during interviews, which provided meaningful insight for the authors. These officials also supplied valuable the data sets that enabled the quantitative analysis of this report. Thank you to the Pennsylvania Department of Community and Economic Development, particularly Andrew Sheaf; the Ohio Auditor of State, particularly Diane Finn and David Thompson; the Louisiana Legislative Auditor Advisory Services Section, particularly Bradley Cryer and Steven Kraemer; and the Colorado Department of Local Affairs Division of Local Government, particularly Rachel Harlow-Schalk and Cynthia Thayer.

II. INTRODUCTION

The Great Recession of 2007-2009, nearly a decade ago now, was the catalyst for a series of major financial problems in American local governments. These problems saw the advent of over seven major municipal bankruptcies and dozens of other local emergencies and crisis situations. While these problems now appear to be safely in the rearview mirror, they have exposed deeper fault lines in the stability and resilience of local governments across the country. For many states, these problems have heralded a new era, which has resulted in the search for proactive strategies to prevent and mitigate financial instability before it becomes a crisis.

There is a long history of attempts to measure and identify local fiscal problems going back to the crisis of New York city in the 1970's. At that time, it became popular to attempt to use ratio analysis, as first used in the private sector for credit analysis, to use a series of ratios to identify local fiscal problems. These ratios were seen as predictive of potential problems that may arise in the ability of a local government to pay its bills as they come due.

As computing power and data have improved, more states have joined in attempting to predict fiscal distress using ratios. Generally, these strategies have focused on a series of current ratio and long-term ratios to match up the scale and scope of problems that may exist. The International City/County Management Association (ICMA) developed the Financial Trend Monitoring System (FTMS) and pioneered the terminology of cash solvency, budgetary solvency, long-run solvency and service-level solvency. These terms are still in wide use today. They reflect the fact that one may wish to consider a range of time frames within which to measure fiscal distress. Generally speaking, these four types of solvency categories have been perceived to fully encompass the universe of local fiscal and service indicators.

For a variety of reasons, states have chosen a wide mix of indicators and indexes from which to construct a fiscal early warning system. Some states may be focused strictly on short-term cash and liquidity and the avoidance of payment problems. Other states have chosen based on a need to balance long-term interests and service provision with budget solvency.

This report surveys four state early warning systems: Pennsylvania, Ohio, Louisiana, and Colorado. After presenting an overview of each state system in Section IV, it analyzes the ratio indicators used in each system in Section V by comparing the data and results for each state and provides observations and recommendations. The ultimate purpose of this report is to add depth to the literature around fiscal early warning systems by (1) presenting detailed explanations of four existing systems and (2) analyzing the tradeoffs and implications of the four ratio indicator approaches. This report asserts that there is no one optimal system, only the right system based on the perceived needs of policymakers in that particular location.

III: OVERVIEW OF FISCAL SOLVENCY MEASURES

Fiscal early warning systems are constructed to measure some form of solvency over some duration of time. The form of solvency and the duration of time varies considerably from one system to another. The (ICMA) termed four measures of fiscal solvency – cash solvency, budgetary solvency, long-run solvency and service-level solvency. These terms are widely used today.

Each type of solvency has been associated with various indicators. Cash solvency has typically been identified with short-term indicators such as the current and cash ratio. Budget solvency, which is defined as a period of being solvent over 1 to 3 years, is associated with operating deficits, other revenue to expenditure measures, and the like. Cash and budgetary solvency are both measures for shorter-term solvency. Long-run solvency measures whether a government can meet its payment demands in 10 or 20 years and may be associated with long-term infrastructure maintenance, pension and retiree health care liabilities and other commitments. Finally, service-level solvency is whether the government can meet the needed service priorities of residents and local businesses and community groups without threatening its fiscal solvency. Perhaps, not surprisingly, service-level solvency indicators have been among the most difficult to gauge. Long-run and service-level solvency are both measures for longer-term solvency.

These four measures of solvency are not discrete. Shorter-term and longer-term issues are closely related. Government actions taken today are often not only informed by expectations for the longer-term future but also then shape that future. Additionally, shorter-term and longer-term measures may portray differing outlooks. Ratios can indicate that a government is healthy or unhealthy in both the shorter- and longer-term. But they can also indicate that a government is healthy in the shorter-term but unhealthy in the longer-term and vice versa.

This report finds great value in the four measures of fiscal solvency pioneered by the ICMA. Thus, it refers to these measures in its case study presentations and employs them extensively in its ratio indicator analysis.

	Solvency Measure	Solvency Term
Short-Term	Cash	30 – 60 days
	Budgetary	Normal budget period, often 1 – 3 years
Long-Term	Long-Run	Greater than a normal budgetary period, often 10 – 20 years
	Service-Level	Ability to meet the needed local service priorities without threatening long-term fiscal solvency

IV: CASE STUDY PRESENTATION: FOUR EXISTING LOCAL FISCAL WARNING SYSTEMS

This section presents four examples of local fiscal early warning systems for the states of Pennsylvania, Ohio, Louisiana, and Colorado. Between these four states, there are many differences geographically, economically, demographically, and legislatively. As a result, the four local fiscal early warning systems each have a different context, purpose, and approach. This dissimilarity is intentional to give the reader a sampling of different approaches. This section presents each state's approach individually. Each state profile presents contextual information, an explanation of its early warning system methodology, and a brief description of its implementation.

Pennsylvania Early Warning System for Municipal Recovery

- **Established in:** 1987, revamped in 2017
- **Administered by:** Pennsylvania Department of Community and Economic Development
- **Data Source:** submitted electronically during the local auditing process, taken from American Community Survey (U.S. Census Bureau), and taken from the biennial Auditor General Municipal Pension Task Force Report
- **Governments Analyzed:** 2,560 local government units, including cities, townships and boroughs
- **Publication:** Operates as an internal system; does not publicize data sets or analysis
- **Number of Indicators:** 15
- **Indicator Solvency-Type Measures:** Cash, Budgetary, Long-Run and Service-Level
- **Purpose:** Seeks to identify fiscally distressed municipalities before, “they reach crisis proportions,” in order to provide early warning and State resources and ultimately limit the degree of fiscal distress.¹

Context

For more than 30 years, the State of Pennsylvania has legislatively mandated an “early warning system” for municipal fiscal distress. In 1987, the Pennsylvania State Legislature enacted the Municipalities Financial Recovery Act (Act 47), which consists of vast legislation centering around a broad perspective on municipal finance:

It is hereby declared to be a public policy of the Commonwealth to foster fiscal integrity of municipalities so that they provide for the health, safety and welfare of their citizens; pay principal and interest on their debt obligations when due; meet financial obligations to their employees, vendors and suppliers; and provide for proper financial accounting procedures, budgeting and taxing practices. The failure of a municipality to do so is hereby determined to affect adversely the health, safety and welfare not only of the citizens of the municipality but also of other citizens in this Commonwealth.²

Act 47 was enacted amidst a precarious economic context. The state and many of its units of local government have been faced with challenges that center around population and income rates that have not kept pace with the rest of the nation for decades. Between 1980 and 2017, both population and household income rose across the U.S. by more than four times the rates for Pennsylvania, as shown in Figure 1. In some respects, the state has followed national averages. Unemployment and housing prices change have tracked closely with U.S. rates for nearly 40 years. Public spending is slightly greater in Pennsylvania than it is nationally, as shown in Figure 2. Both federal spending per capita and state and local spending per capita exceed

¹ Pennsylvania State Legislature, *Municipal Financial Recover Act of 1987*, <https://www.legis.state.pa.us/WU01/LI/LI/US/HTM/1987/0/0047..HTM> (accessed January 21, 2019).

² Ibid

national averages. Over the last decade, the state has even exceeded national averages in some respects. Household income increased by 7.5% in Pennsylvania as it stagnated nationwide. The poverty rate is now below the national average.

Figure 1: Pennsylvania Population, Housing Prices, Income, and Unemployment, 1980 – 2017
\$ Values in 2017 Inflation Adjusted Dollars

	Population	Median Home Value	Median Household Income	Unemployment Rate ³
1980	11,863,895	\$110,176	\$55,913	8.00%
1990	11,881,643	\$126,830	\$52,910	5.50%
2000	12,281,054	\$138,076	\$60,204	4.10%
2010	12,702,379	\$186,041	\$54,436	8.40%
2017	12,805,537	\$181,200	\$59,195	4.90%
Change 1980-2017	7.94%	64.46%	5.87%	-38.75%
USA 2017	325,147,121	\$217,600	\$61,372	4.40%
USA Change 1980-2017	43.52%	63.67%	26.64%	-38.89%

Source: Data from the U.S. Census Bureau and the U.S. Department of Labor Bureau of Labor Statistics

Figure 2: Pennsylvania Federal, State & Local Spending, 2006 – 2015
\$ Values in April 2019 Inflation Adjusted Dollars

	Population	Federal Spending/Capita	State & Local Spending/Capita	Total Spending/Capita
2006	12,510,809	\$9,918.75	\$9,193	\$19,112
2007	12,563,937	\$10,631.35	\$9,160	\$19,791
2008	12,612,285	\$10,657.79	\$9,219	\$19,877
2009	12,666,858	\$12,555.99	\$9,660	\$22,216
2010	12,612,705	\$12,962.61	\$9,739	\$22,702
2011	12,660,739	\$12,471.78	\$9,753	\$22,225
2012	12,699,589	\$12,099.74	\$9,408	\$21,508
2013	12,731,381	\$11,599.47	\$9,422	\$21,021
2014	12,758,729	\$11,706.68	\$9,427	\$21,134
2015	12,779,559	\$12,082.10	\$9,651	\$21,733
Change 2006-2015	2.15%	21.81%	4.98%	13.72%
USA 2015	320,742,673	\$11,338.67	\$9,498	\$20,837

³ The methodology used by the U.S. Department of Labor Bureau of Labor Statistics for calculating unemployment changed in 2014, which coincides with nationwide decreases.

USA Change 2006-2015	7.49%	14.00%	5.84%	10.13%
Source: Data from the U.S. Census Bureau, the Tax Policy Center of the Urban Institute & Brookings Institution, https://www.taxpolicycenter.org/statistics/state-and-local-general-expenditures-capita (accessed April 15, 2019), and the Council of State Governments, http://knowledgecenter.csg.org/kc/content/federal-spending-states-2015 (accessed April 16, 2019).				

The first mandate of Act 47 is creating a municipal distress early warning system and early intervention process⁴. This is followed by establishing a financial aid package for municipalities in need and then outlining definitions of and legal frameworks for resolving “economically nonviable municipalities,” “fiscal emergencies in municipalities,” and “receivership in municipalities.”⁵ When this legislation was enacted, the Pennsylvania Department of Community Affairs was charged with its administration. This department merged with the Department of Commerce in 1996 to create the Pennsylvania Department of Community and Economic Development (DCED). The high-profile merger was handled carefully, largely because of its impact on the administration of Act 47. Today, State officials cite the merger as one that improved the administration of Act 47 and ultimately the State’s role in municipal recovery.⁶ Since it formed, DCED has managed the State’s Early Warning System (EWS).

The Pennsylvania EWS seeks to identify fiscally distressed municipalities before, “they reach crisis proportions,” in order to provide early warning and State resources and ultimately limit the degree of fiscal distress.⁷ Thus, the system is designed to identify local authorities that are not yet in a state of fiscal emergency but are demonstrating signs of fiscal distress and are most in need of early intervention, which includes financial aid and technical assistance from the State.

DCED revamped the EWS in 2017, in part because of research⁸ that found that 48% of Pennsylvania cities and 13% of all Pennsylvania municipalities exhibited signs of financial distress.⁹ These findings were presented in a report issued by The Center for Rural Pennsylvania,¹⁰ which recommended that the State elevate attention to municipal fiscal health, given the high distress rates. The State took action, in part by revamping the EWS to employ

⁴ Act 47 mandates that, “the department shall develop an early warning system utilizing necessary fiscal and socioeconomic variables to identify municipal financial emergencies before they reach crisis proportions and to notify an affected municipality appropriately. The department shall be responsible for testing the validity and reliability of these variables and shall continuously monitor them to assure their effectiveness.”

⁵ Pennsylvania State Legislature

⁶ Dave Black and Rick Russel, written testimony regarding the impact of the merger of the Pennsylvania Department of Community Affairs and the Department of Commerce, provided by the Department of Community and Economic Development, March 2019.

⁷ Pennsylvania State Legislature

⁸ Patricia A. Patrick and John M. Trussel, “An Analysis of Survey of Financial Condition Data,” *The Center for Rural Pennsylvania*, May 2013.

⁹ Municipalities that answered “Yes” to at least one of the questions in Appendix I.

¹⁰ Patricia A. Patrick and John M. Trussel, “An Analysis of Survey of Financial Condition Data,” *The Center for Rural Pennsylvania*, May 2013.

the methodology used in The Center for Rural Pennsylvania report. The current EWS was developed over an 18-month process that consisted of reviewing recent research on municipal health in Pennsylvania, studying local fiscal health monitoring common practices, and brainstorming sessions amongst staff. The current EWS is heavily influenced by the methodology and recommendations of The Center for Rural Pennsylvania report¹¹. Many of the measures of fiscal health employed in the 2013 report were selected as indicators for the EWS. DCED staff examined references for local fiscal health monitoring, particularly publications by the Government Finance Officers Association and the International City/County Management Association. These references validated much of the methodology in The Center for Rural Pennsylvania report. Finally, staff held brainstorming sessions to ensure that the EWS structure worked towards its intended purpose and was structured to align with staff observations of local government dynamics. Several long-run and service-level indicators that measure local government dynamics identified by DCED staff were added during this process¹².

The system is used annually to analyze the financial condition of 2,560 cities, townships and boroughs to identify distressed municipalities and prioritize those for early intervention by the State.

Methodology

The EWS examines the financial condition of Pennsylvania municipalities by analyzing annual financial, demographic, and economic data for each local government unit. These municipalities include cities, townships, and boroughs. They are required to submit annual audits to the State. The State upgraded its data collection process in 2011 and began mandating electronic filing in 2015. Now, local governments are required to electronically submit financial data necessary for the EWS analysis. DCED staff supplements this with demographic and economic data from the U.S. Census Bureau and pension data from a biennial Auditor General pension report. The State publicizes annual financial reports for municipalities on the DCED website¹³.

The EWS contains 15 indicators, as shown in Figure 3, which look for signals of municipal distress, including financial, social, and economic. The financial indicators (Indicators 1 – 7) consist of simple ratios that gauge equity, operating position, and liquidity. It is worth noting that pension obligations are considered in the financial indicators (Indicator 6). The other nine

¹¹ Andrew Sheaf, *Local Government Policy Manager, Pennsylvania Department of Community & Economic Development*, interview by Natalie Pruett and Shu Wang, *Center for Local Government & Policy, Michigan State University Extension*, January 22, 2019.

¹² Specifically, Indicators 6, 7, 14 and 15. Staff noted that it was able to access pension data from the Auditor General Municipal Pension Task Force Report and thus was able to add Indicator 6. Staff observed that municipalities that spend more money per capita on public safety, that have higher rates of residential vacancy, and that have lower owner-occupancy rates are often correlated with greater fiscal distress. Thus, it identified and incorporated Indicators 7, 14 and 15.

¹³ <http://munstats.pa.gov/Reports/ReportInformation2.aspx?report=mAfrForm>

indicators all examine social and economic factors (Indicators 8 – 15), such as educational attainment, the rate of housing vacancy, and employment rates. These indicators are included in the analysis because Pennsylvania’s statutory definition of “municipal fiscal integrity” is broad and extends to include the quality of municipal service provision in addition to financial performance, as defined in Act 47. Thus, the Pennsylvania EWS system is concerned with detecting signs of social and economic stress in addition to financial.

Figure 3: Pennsylvania Early Warning System for Municipal Recovery Indicators				
DESCRIPTION		FUND TYPE	QUESTION/FORMULA	SOLVENCY MEASURE
<i>Financial</i>				
1	Fund Equity-1	General	Fund Equity/Total Revenue	Budgetary
2	Fund Equity-2	General	Fund Equity/Total Assets	Budgetary
3	Operating Position	General	Total Expenditures/Total Revenues	Budgetary
4	Long-Term Debt	Government-Wide	Total Outstanding Debt in Debt Statement/Total Revenue	Long-Run
5	Liquidity	Government-Wide	Cash & Investments/Total Outstanding Debt	Cash
6	Public Safety Factor	General Fund	Total Public Safety Expenditures/Total Revenue	Service
7	Pension Position	Fiduciary	Funded ratio from Auditor General biennial report	Long-Run
<i>Demographic & Economic</i>				
8	Population Age	NA	% of population 65+ years old	Service-Level
9	Poverty Rate	NA	% of families below poverty level	Service-Level
10	Educational Attainment	NA	% of population over 25 with bachelor’s degree+	Service-Level
11	Unemployment Rate	NA		Service-Level
12	Median Household Income	NA		Service-Level
13	Median Housing Values	NA		Service-Level
14	Residential Vacancy Rate	NA	% of housing units vacant	Service-Level
15	Owner-Occupancy Rate	NA	% of housing units owner-occupied	Service-Level
<i>Source: Data from the Pennsylvania Department of Community and Economic Development</i>				

From the indicators, the EWS generates a numerical score, which reflects the degree to which the municipality is in need of early intervention by the State. To produce this score, the EWS first calculates a value for each indicator. Then, it compares each indicator value against a benchmark value, as shown in Figure 4. When DCED revamped the EWS system in 2017, it analyzed data for municipalities that had Act 47 declarations between 2011 and 2016¹⁴. Most of the benchmark values equal the median values for these fiscally distressed, “Act 47,”

¹⁴ This includes twelve municipalities that had declarations for the duration of this timeframe. If a declaration was made after 2011 or was terminated prior to 2016, the municipality was excluded. Franklin Borough (Cambria) was also excluded because of its (small) size.

municipalities. If an indicator value surpasses the benchmark value, then the municipality is assigned the number of points indicated in Figure 4. The point assignments vary from one indicator to another; the indicators are weighted differently. DCED designed the weighting system through qualitative research and policy discussions. Ultimately, the points for all 15 indicators total 100. Thus, if all of a municipality's indicator values surpass the benchmark values, then it will receive a score of 100 points. If none of its indicator values surpass the benchmark values, then it will receive a score of 0 points.

Figure 4: Pennsylvania Early Warning System for Municipal Recovery Indicator Scoring System					
INDICATOR	DESCRIPTION	BENCHMARK	DIRECTION¹⁵	POINTS¹⁶	JUSTIFICATION¹⁷
<i>Financial</i>					
1	Fund Equity-1	0.167	Descending	8	GFOA Best Practice is 16.67%
2	Fund Equity-2	0.586	Descending	7	Act 47 Median
3	Operating Position	1.02	Ascending	9	Deficit equal to 2% or more of its revenues is an Act 47 criteria
4	Long-Term Debt	1.27	Ascending	7	Act 47 Median
5	Liquidity	0.089	Descending	8	Act 47 Median
6	Pension Factor	79	Descending	7	Auditor General Municipal Pension Task Force Report
7	Public Safety Factor	0.5	Ascending	6	Act 47 Median
<i>Demographic & Economic</i>					
8	Population Age	15.9	Ascending	4	Act 47 Median
9	Poverty Rate	27.6	Ascending	8	Act 47 Median
10	Educational Attainment	13.15	Descending	3	Act 47 Median
11	Unemployment Rate	15.5	Ascending	8	Act 47 Median
12	Median Household Income	29,083	Descending	6	Act 47 Median
13	Median Housing Values	63,550	Descending	7	Act 47 Median
14	Residential Vacancy Rate	18.9	Ascending	7	Act 47 Median

¹⁵ This signals the direction of the benchmark measure. If the direction is descending, then an indicator value less than the benchmark value signals potential fiscal distress. Likewise, if the direction is ascending, then an indicator value greater than the benchmark value signals potential fiscal distress.

¹⁶ DCED staff developed the weighting system for the EWS. They used an inductive approach to assign more or less weight to an indicator according to Department priorities their observations of the correlation between indicator dynamics and municipal fiscal health. If an indicator value surpasses the benchmark value, then the municipality is assigned the number of points listed in Figure 4. For example, for Indicator 11, if the employment rate for a municipality exceeds 15.5%, then it receives 8 points but if the rate is 15.5% or less, then it receives zero points.

¹⁷ Justification for the benchmark value.

15	Owner-Occupancy Rate	46.9	Descending	5	Act 47 Median
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Implementation

Since launching its new EWS in 2017, the State has used the system to identify local governments in need of support. Each year, after the local governments are scored, the DCED ranks the governments. Then, it contacts the 100 local governments with the highest number of points regarding potential grants and/or technical assistance. The State chose the threshold of the 100 highest-scoring local governments because of its financial and administrative capacity.

Ohio Fiscal Health Indicators

- **Established in:** 2017
- **Administered by:** Ohio Auditor of State
- **Data Source:** submitted electronically first during the local financial reporting process and then verified during the local auditing process
- **Governments Analyzed:** approximately 335 local authorities: 88 counties and 247 cities
- **Publication:** Publicizes indicator results and data annually
- **Number of Indicators:** 17
- **Indicator Solvency-Type Measures:** Cash, Budgetary, Long-Run and Service-Level
- **Purpose:** Seeks to prevent “fiscal crisis” and to, “elevate the discussion around local government financing and budgeting.”¹⁸

Context

In 1996, the Ohio State Legislature enacted a package of legislation to regulate local government finance.¹⁹ It established fiscal condition and reporting standards for local authorities as well a State monitoring and intervention process, which is administered by the Ohio Auditor of State (Auditor). When the Auditor suspects that a local authority is in fiscal distress, it conducts an assessment and may place the authority in “fiscal caution,” “fiscal watch,” or “fiscal emergency.”²⁰ The qualification criteria and State oversight process are distinct for these three categories and are defined by the enabling legislation. This legislation was passed amidst a challenging economic climate that has persisted. The state of Ohio’s population has only grown by 8% over the last forty years, compared to 44% nationwide, as shown in Figure 5. Unemployment has generally aligned with national averages but household incomes in real dollars have decreased since 1980. Public spending as a whole increased over the last decade, as shown in Figure 6. But, both federal spending per capita and state and local spending per capita are below national averages. And, state and local spending per capita actually decreased. Simultaneously, poverty rose in Ohio. These challenges impact local fiscal health.

¹⁸ “Financial Health Indicators Update: An Overview” *Ohio State Legislature*, <https://www.ohioauditor.gov/FHI/fhi%20update%20OVERVIEW.pdf>, accessed February 21, 2019.

¹⁹ A parallel, but separate, package of legislation was enacted by the Ohio State Legislature in 1996 for school districts (<http://codes.ohio.gov/orc/3316>). Since then, 85 fiscal emergencies or fiscal watches have been declared for school districts and subsequently resolved. Currently, two school districts are in a state of fiscal emergency (https://www.ohioauditor.gov/fiscal/02_26_2019%20School%20Update.pdf).

²⁰ There are numerous criterion that empower the State of Ohio to declare fiscal caution, watch, or emergency. Visit <http://codes.ohio.gov/orc/118> (accessed March 4, 2019), Ohio State Legislature, to view the full criterion.

Figure 5: Ohio Population, Housing Prices, Income, and Unemployment, 1980 – 2017
\$ Values in 2017 Inflation Adjusted Dollars

	Population	Median Home Value	Median Household Income	Unemployment Rate
1980	10,797,630	\$126,545	\$58,809	8.40%
1990	10,847,115	\$115,443	\$54,748	5.70%
2000	11,353,140	\$147,613	\$61,326	4.00%
2010	11,536,504	\$151,081	\$51,701	10.20%
2017	11,658,609	\$144,200	\$54,021	5.00%
Change 1980-2017	7.97%	13.95%	-8.14%	-40.48%
USA 2017	325,147,121	\$217,600	\$61,372	4.40%
USA Change 1980-2017	43.52%	63.67%	26.64%	-38.89%

Source: Data from the U.S. Census Bureau and the U.S. Department of Labor Bureau of Labor Statistics

Figure 6: Ohio Federal, State & Local Spending, 2006 – 2015
\$ Values in April 2019 Inflation Adjusted Dollars

	Population	Federal Spending/Capita	State & Local Spending/Capita	Total Spending/Capita
2006	11,481,213	\$8,755	\$9,173	\$17,928
2007	11,500,468	\$8,589	\$9,237	\$17,826
2008	11,515,391	\$8,788	\$9,025	\$17,813
2009	11,528,896	\$10,800	\$9,316	\$20,116
2010	11,512,431	\$10,472	\$9,258	\$19,730
2011	11,525,536	\$10,489	\$9,327	\$19,816
2012	11,533,561	\$10,398	\$8,882	\$19,280
2013	11,549,590	\$9,611	\$8,821	\$18,432
2014	11,560,380	\$10,121	\$8,975	\$19,096
2015	11,575,977	\$10,058	\$8,930	\$18,988
Change 2006-2015	0.83%	14.88%	-2.65%	5.91%
USA 2015	320,742,673	\$11,338.67	\$9,498	\$20,837
USA Change 2006-2015	7.49%	14.00%	5.84%	10.13%

Source: Data from the U.S. Census Bureau, the Tax Policy Center of the Urban Institute & Brookings Institution, <https://www.taxpolicycenter.org/statistics/state-and-local-general-expenditures-capita> (accessed April 15, 2019), and the Council of State Governments, <http://knowledgecenter.csq.org/kc/content/federal-spending-states-2015> (accessed April 16, 2019).

Since the 1996 legislation was enacted, 119 fiscal declarations have been made for local governments.²¹ Of these, 98 were resolved²² (67 fiscal emergencies, 22 fiscal watches, and 9 fiscal cautions).²³ Currently, declarations are in place for 21 local governments (13 in fiscal emergency, 2 in watch, and 6 in caution).²⁴ The initial legislation has been amended and expanded upon several times.²⁵ In September of 2011, the State enacted legislation that essentially requires the Auditor to create a fiscal distress early warning system²⁶.

The Ohio Financial Health Indicator (FHI) system was developed with two objectives; “Help local officials avoid a fiscal crisis by identifying potential problems in their fiscal health, and to elevate the discussion around local government financing and budgeting.”²⁷ The Auditor²⁸ championed the development of the system in policy and practice. Staff from the Auditor’s office began developing the system in 2011 and fully launched it in 2017. The system was developed in three phases. First, staff conducted research on fiscal health condition analysis. Like Pennsylvania, they examined publications from the Government Finance Officers Association and the International City/County Management Association. They also analyzed other state-level fiscal monitoring systems. From their research, they generated an extensive list of commonly used indicators. Then, second, they analyzed the indicators with city and county level data for Ohio. They used an inductive approach to identify indicators that seemed to distinguish municipalities that had fiscal distress declarations. Lastly, third, they engaged local government officials. They shared draft methodologies and results with local officials and made modifications to the final system from local feedback. For example, local officials gave feedback on the formatting of the reports and offered suggestions on how they might be more easily understood. The color-coding signal method, as described further below, was developed in response to this feedback to make the FHI reports more useful at the local level.

The system now annually analyzes the fiscal health of Ohio’s larger local governments, including 88 counties and 247 cities.

Methodology

²¹ Data from the Ohio Auditor, https://www.ohioauditor.gov/fiscal/Chapter%20118_03_11_2019.pdf, accessed February 19, 2019.

²² Cases are resolved one the municipality no longer meets the relevant definition of fiscal caution, watch, or emergency.

²³ Ibid

²⁴ Ibid

²⁵ Ohio State Legislature, <http://codes.ohio.gov/orc/118>, accessed March 4, 2019.

²⁶ The new legislation requires the Auditor to, “develop guidelines for identifying fiscal practices and budgetary conditions of municipal corporations, counties, and townships that, if uncorrected, could result in a future declaration of a fiscal watch or fiscal emergency” (<http://codes.ohio.gov/orc/118.025v1>).

²⁷ “Financial Health Indicators Update: An Overview” *Ohio State Legislature*, <https://www.ohioauditor.gov/FHI/fhi%20update%20OVERVIEW.pdf>, accessed February 21, 2019.

²⁸ The Ohio Auditor of State is elected to four-year terms, limited to two terms (). Auditor of State Dave Yost was elected in 2010, supported legislation requiring the system in 2011, and charged his staff with developing the system.

The FHI examines the financial health of 335 local governments by analyzing annual financial health data for each unit of government. These units of government consist of the larger local governments in Ohio: all 88 counties and 247 cities. FHI reports are generated through an automated system in two phases. Local governments are required to submit annual financial statements. As part of this process, they are required to electronically submit data necessary for the FHI analysis. Once this information is submitted, a “preliminary” FHI report is automatically generated and delivered to both the State Auditor and the local unit. The preliminary report is also posted to the FHI website. The Ohio State Legislature also requires that all public authorities submit to audits²⁹ conducted or contracted by the State Auditor. During the auditing process, auditors are also required to review the financial data reported to the State and to submit any adjustments and audit result data necessary for FHI analysis. Once the audit is completed a “final” FHI report is generated. The data in the final report generally reflects financial actions taken by a local authority with a six to twenty-four-month lag. This is because the audit is usually completed six to twelve months after the end of the local authority’s fiscal year.

The FHI contains 17 indicators³⁰, as shown in Figure 7, which seek to detect signs of early fiscal distress. The indicators examine various financial aspects, including trends in equity, revenue, expenses, dependence on inter-governmental revenue, investments in capital assets, debt as well as compliance with State budgetary and accounting regulations. The indicator values are a combination of ratios, recent trends, and financial information.

Figure 7: Ohio Financial Health Indicators				
DESCRIPTION		FUND TYPE	QUESTION/FORMULA	SOLVENCY MEASURE
1a	Equity	Government-Type Activities	Unrestricted Net Assets/Position	Budgetary
1b	Equity 1-Year Change	Government-Type Activities	Current Year Unrestricted Net Assets/Position – Prior Year Unrestricted Net Assets/Position	Budgetary
2a	Unassigned Fund Balance	General		Budgetary
2b	Unassigned Fund Balance 1-Year Change	General	Current Year Unassigned Fund Balance – Prior Year Unassigned Fund Balance	Budgetary
3	Equity 3-Year Change	Government-Type Activities	Yearly Changes in Equity over the Three Prior Periods	Budgetary

²⁹ The legislation requires audits to be submitted once every 2 years unless the agency is subject to single audits. According to staff from the Auditor’s office, most counties and cities are subject to and opt for annual audits but, a small number of cities are audited on a biennial basis. See OH 117.11 Annual, biennial, and early audits.

³⁰ The FHI consists of 17 indicators for local governments that report on a Generally Accepted Accounting Principles (GAAP) basis, which represent for the vast majority of units analyzed by the FHI. For local governments that report on a cash or modified cash basis, only 15 of the 17 indicators are used as Indicators 11 and 16 are excluded.

4	Unassigned Fund Balance 3-Year Change	General	Yearly Changes in Unassigned Fund Balance over the Three Prior Periods	Budgetary
5a	Fund Balance Strength	General	Fund Balance/Revenues	Budgetary
5b	Fund Balance Strength 3-Year Change	General	Current Year Fund Balance Strength – Fund Balance Strength from 3 Years Prior	Budgetary
6a	Property Tax Revenue Dependency	General	Property Tax Revenue/Total Revenue	Long-Run
6b	Property Tax Revenue Dependency 1-Year Change	General	Current Year Property Tax Dependency – Prior Year Property Tax Dependency	Long-Run
6c	Property Tax Revenue Dependency 3-Year Change	General	Current Year Property Tax Dependency – Property Tax Dependency from 3 Years Prior	Long-Run
7a	Tax Revenue Dependency	General	Income Tax/Total Revenue (Cities) or Sales Tax/Total Revenue (Counties)	Long-Run
7b	Tax Revenue Dependency 1-Year Change	General	Current Tax Revenue Dependency – Prior Year Tax Revenue Dependency	Long-Run
7c	Tax Revenue Dependency 3-Year Change	General	Current Tax Revenue Dependency – Tax Revenue Dependency from 3 Years Prior	Long-Run
8	Revenue-Expense Ratio	General	(Revenue-Expenditures)/Revenue	Budgetary
9	Net Expense Coverage by Revenue	Government-Type Activities	General Revenue/Net Expenses	Long-Run
10	Inter-government Revenue Share	General	Inter-government Revenue/Total Revenue	Long-Run
11*	Condition of Capital Assets	Government-Wide	Depreciation of Capital Assets/Value of Capital Assets	Service-Level
12	Debt Service to Revenue	Government-Wide	Debt Service Expenditures/Revenue	Long-Run
13	Average Daily Expenses Ratio-1	Government-Type Activities	(Unrestricted Net Assets/Position)/Average Daily Expenses	Budgetary
14	Average Daily Expenses Ratio-2	General	Unassigned Fund Balance/Average Daily Expenses	Budgetary
15	Average Daily Expenses Ratio-3	General	(Cash + Investments)/Average Daily Expenses	Cash
16*	Debt Service Percentage	Government-Type Activities	Total Liabilities/(Total Net Assets/Position)	Long-Run
17	Budgetary and Accounting Compliance	NA	Does the audit report budgetary non-compliance and/or unreconciled/un-auditable financial records?	
*Indicators 11 and 16 are excluded from the analysis for local governments that report on a cash or modified cash basis.				

Source: Data from the Ohio Auditor of State

The FHI system generates “outlooks” for each individual indicator and provides guidelines for interpreting the indicator outlooks collectively. After the value for each indicator is calculated, it is assigned to one of three outlook classifications – “positive,” “cautionary,” or “critical,” – that are represented by the colors green, yellow, and red, as shown in Figure 8. The color-coding system employs stoplight signals and is intended to allow for easy interpretation. The classification threshold values were set by the State during its analysis of previously fiscally distressed communities. Staff from the State reports confidence that the individual outlooks are valuable. “Whether it’s a county that’s healthy but has one issue trending in the wrong direction or a city that’s struggling with many challenges, it’s useful for them to know, issue by issue, how they’re doing and where to focus their attention.”³¹ However, there is a collective interpretation of the individual outlooks also. During its analysis of previously distressed communities, the State observed that governments with fiscal distress declarations had six or more critical indicators and had a combination of eight critical and cautionary indicators in the years leading up to the declaration. Thus, the State advises that local governments with critical and/or cautionary outlook numbers equal to or approaching these thresholds should understand that they are likely to meet the legislative definitions of fiscal distress now or in the near future.

Figure 8: Ohio Financial Health Indicators Stoplight Classification

FINANCIAL HEALTH INDICATORS

How to read the indicators

2015 Financial Health Indicators at a Glance:



Source: “Financial Health Indicators: How to Read the Indicators,” provided by the Ohio State Auditor, January 2019.

Implementation

³¹ Diane L. Finn, *Quality Assurance & Technical Specialist, Center for Audit Excellence, Ohio Auditor of State*, interview by Natalie Pruett and Shu Wang, *Center for Local Government & Policy, Michigan State University Extension*, January 29, 2019.

Since it was established, the FHI has identified dozens of local governments that are likely experiencing fiscal distress or might be in the future. These local governments, which have six or more critical indicators or eight or more cautionary indicators, are encouraged to contact the Ohio Local Government Services section for assistance with a more detailed financial assessment and to determine if they meet any of the state criteria for fiscal distress. However, the impact of the FHI extends beyond statutory fiscal distress detection. The FHI has also assisted dozens of local governments in detecting and addressing specific financial issues, even though they are fiscally stable overall. “Even one red is worth knowing about and taking action on,” explained an Ohio official from the Auditor’s office.³² Additionally, the FHI system has increased the public’s understanding of locally-specific and statewide municipal fiscal health. The Auditor has invested in disseminating information from the FHI system to a range of stakeholders, including the general public and elected officials. The system reports are designed to be easy to understand. A State report from 2017 states that, “Less than a year later, the FHI are having their desired effect. According to news reports, officials in communities across the Buckeye State have discussed the tool during budget deliberations.”³³

³² Diane L. Finn, *Quality Assurance & Technical Specialist, Center for Audit Excellence, Ohio Auditor of State*, interview by Natalie Pruett and Shu Wang, *Center for Local Government & Policy, Michigan State University Extension*, January 29, 2019.

³³ “Financial Health Indicators Update: An Overview” *Ohio State Legislature*, <https://www.ohioauditor.gov/FHI/fhi%20update%20OVERVIEW.pdf>, accessed February 21, 2019.

Louisiana Early Warning System for Fiscal Administration

- **Established in:** 2013
- **Administered by:** Louisiana Legislative Auditor, Advisory Services Section
- **Data Source:** submitted electronically during the local auditing process
- **Governments Analyzed:** approximately 2,300 local authorities, including cities, towns, hospitals, and special districts
- **Publication:** Publicizes local-level data sets
- **Number of Indicators:** 20
- **Indicator Solvency-Type Measures:** Cash, Budgetary and Long-Run
- **Purpose:** Seeks to minimize the number of local authorities placed under fiscal administration, a process established by the Louisiana State Legislature.

Context

In 1990, the Louisiana State Legislature enacted legislation to authorize state intervention when it deems that a local authority is not “fiscally stable” (Act 532).³⁴ This legislation, as amended, created a Financial Review Committee that consists of the Louisiana Legislative Auditor, State Treasurer, and Attorney General and created a process for selecting and judicially appointing a Fiscal Administrator.³⁵ The initial legislation was amended twice, in 2005 (Public Act 7) and in 2013 (Public Act 336), to create the legal framework that exist today. Currently, the Fiscal Review Committee can recommend the court appointment of a Fiscal Administrator if a local authority meets one of three³⁶ following criteria (R.S. 39:1351):

- *Audit Law Compliance:* It has failed to provide an audit as required by R.S. 24:513 for three consecutive fiscal years
- *Debt Payment Compliance:* It is reasonably certain to fail to make a debt service payment
- *Revenue Sufficiency:* It is reasonably certain to not have sufficient revenue to pay current expenditures, excluding civil judgments

Louisiana’s Early Warning System has emerged amidst a challenging economic climate. Household incomes in real dollars have decreased since 1980, as shown in Figure 9. Unemployment exceeds the national average and the state’s population has grown only modestly over the last forty years. Over the last decade, public spending as a whole decreased, by nearly 9% per capita, as shown in Figure 10. State and local spending actually increased. But, while federal spending per capita increased by 14% nationwide, it decreased by 18% in Louisiana. Meanwhile, poverty rose across the state’s cities and towns.

³⁴ Louisiana Legislative Auditor, “Overview of Laws on Fiscal Administration,” [https://app.la.state.la.us/lla/nsf/01C0A8415F92560B86257D1E004A4082/\\$FILE/White%20Paper%20-%20Fiscal%20Administration.pdf](https://app.la.state.la.us/lla/nsf/01C0A8415F92560B86257D1E004A4082/$FILE/White%20Paper%20-%20Fiscal%20Administration.pdf), accessed February 25, 2019.

³⁵ Ibid

³⁶ A fourth criterion exists for school boards, which can also be placed under fiscal administration if they are, “Reasonably certain to fail to resolve status as financially at risk as defined by rule by the State Board of Elementary and Secondary Education.”

Figure 9: Louisiana Population, Housing Prices, Income, and Unemployment, 1980 – 2017
\$ Values in 2017 Inflation Adjusted Dollars

	Population	Median Home Value	Median Household Income	Unemployment Rate
1980	4,205,900	\$121,136	\$50,439	6.90%
1990	4,219,973	\$106,333	\$40,870	6.20%
2000	4,468,976	\$120,994	\$43,848	5.30%
2010	4,533,372	\$154,566	\$44,280	8.00%
2017	4,684,333	\$162,500	\$46,145	5.10%
Change 1980-2017	11.38%	34.15%	-8.51%	-26.09%
USA 2017	325,147,121	\$217,600	\$61,372	4.40%
USA Change 1980-2017	43.52%	63.67%	26.64%	-38.89%

Source: Data from the U.S. Census Bureau and the U.S. Department of Labor Bureau of Labor Statistics

Figure 10: Louisiana Federal, State & Local Spending, 2006 – 2015
\$ Values in April 2019 Inflation Adjusted Dollars

	Population	Federal Spending/Capita	State & Local Spending/Capita	Total Spending/Capita
2006	4,302,665	\$13,194.85	\$9,089	\$22,284
2007	4,375,581	\$11,339.58	\$9,939	\$21,279
2008	4,435,586	\$11,114.15	\$11,507	\$22,621
2009	4,491,648	\$13,559.56	\$11,499	\$25,059
2010	4,429,940	\$13,730.91	\$11,129	\$24,860
2011	4,484,596	\$11,450.79	\$10,855	\$22,306
2012	4,529,605	\$11,304.20	\$10,375	\$21,679
2013	4,567,968	\$10,751.31	\$10,018	\$20,769
2014	4,601,049	\$10,868.67	\$9,659	\$20,528
2015	4,625,253	\$10,870.02	\$9,459	\$20,329
Change 2006-2015	7.50%	-17.62%	4.07%	-8.77%
USA 2015	320,742,673	\$11,338.67	\$9,498	\$20,837
USA Change 2006-2015	7.49%	14.00%	5.84%	10.13%

Source: Data from the U.S. Census Bureau, the Tax Policy Center of the Urban Institute & Brookings Institution, <https://www.taxpolicycenter.org/statistics/state-and-local-general-expenditures-capita> (accessed April 15, 2019), and the Council of State Governments, <http://knowledgecenter.csq.org/kc/content/federal-spending-states-2015> (accessed April 16, 2019).

The Louisiana Early Warning System for Fiscal Administration (EWS) seeks to minimize the number of local authorities placed under fiscal administration. Thus, the System is designed to identify local authorities that are on the verge of meeting the fiscal administration criteria. It was established in 2013, amidst an increase in the number of Fiscal Administrator appointments. Fiscal Administrators were appointed to seven local authorities between 2009 and 2013 and three between 2012 and 2013 alone. In response, the Legislative Auditor directed its Advisory Services Section to develop a fiscal instability early warning system. In doing so, the Legislative Auditor sought to identify agencies that “may be at high risk” of meeting the Fiscal Administrator criteria in the near future so that the Legislative Auditor could intervene informally earlier and ultimately prevent Fiscal Administrator appointment.³⁷ The Advisory Services Section was chosen to develop the system because it maintains direct relationships with local authorities. It provides operational assistance to local authorities, including answering questions from local government officials and providing technical assistance. Staff from the Advisory Services Section developed the system internally over the course of seven months, completing the first phase in February of 2014. The system was revised in the following year, in 2015.

The Legislative Auditor devoted the majority of its efforts on strategically selecting the ratio indicators and developing a scoring process, which it collectively calls the Financial Assessment Model (FAM). The State took a statistical selection approach that first classified agencies as fiscally distressed or not fiscally distressed and then selected financial ratios that affirmed and displayed the greatest variance between the classifications. As staff from the Advisory Services Section put it, “... a good ratio would describe an entity who is having financial problems as having financial problems and distinguish it from those who aren’t.”³⁸ The process for selecting the ratio indicators is provided in greater detail below.

- Step 1: Identify entities that are fiscally distressed. The Legislative Auditor’s office selected 22 local authorities, including 6 from Louisiana and 16 from other states (see Figure 12). Generally, these local authorities had filed for bankruptcy and/or had been placed in fiscal administration or a similar status.
- Step 2: Calculate a vast number of financial ratios for Louisiana local authorities and fiscally distressed agencies. In 2015, the State calculated 1,726 ratios.
- Step 3: Remove ratios that lack data for greater than 70% of agencies.
- Step 4: Remove ratios that have equal values for 50% of agencies or more.
- Step 5: Select ratios that placed the fiscally distressed entities in the bottom 25%.
- Step 6: Review the remaining ratios individually and remove ratios that have an ambiguous meaning or that seem redundant.

³⁷ Louisiana Legislative Auditor, “Early Warning System for Fiscal Administration Manual,” September 2018.

³⁸ Bradley Cryer, *Director of Local Government Services, Louisiana Legislative Auditor*, interview by Natalie Pruett and Shu Wang, *Center for Local Government & Policy, Michigan State University Extension*, December 7, 2018.

Ultimately, the system has been used in its current form to analyze the fiscal stability of approximately 2,300 local authorities on an ongoing basis³⁹.

Methodology

The EWS assesses the fiscal stability of approximately 2,300 local authorities by analyzing annual financial health data for each authority. These local authorities consist of cities, towns, parishes, hospitals, school boards, and special districts. The Louisiana State Legislature requires that all public authorities submit annual audits or other financial reports to the Legislative Auditor within six months after the end of a local authority's fiscal year. During the auditing process, auditors are now required to electronically submit a Financial Indicators Worksheet, which supplies the data necessary for EWS analysis. The worksheet consists of approximately 70 fields. The data generally reflects financial actions taken by a local authority with a six to eighteen-month lag. Most of the data from the Financial Indicators Worksheet is publicized by the Legislative Auditor.⁴⁰

The EWS contains 20 indicators, which intend to evaluate an authority's risk of meeting one of the State's three fiscal stability criteria, as shown in Figure 11. The indicators for audit law compliance and debt payment compliance (Indicators 1 – 3) consist of straightforward questions as to whether or not the agency has complied with audit and debt payment requirements. The remaining seventeen indicators all seek to gauge revenue sufficiency. These indicators are a combination of additional questions (Indicators 4 – 9), financial ratios (Indicators 10 – 19), and a financial trend analysis (Indicator 20).

Figure 11: Louisiana Early Warning System for Fiscal Administration Indicators				
DESCRIPTION		FUND TYPE	QUESTION/FORMULA	Solvency Measure
<i>Audit Law Compliance</i>				
1	Audit Compliance History, 3 Years	NA	Did the agency submit an audit as required during the reporting year and the previous two years and were they free of disclaimers of opinion?	
<i>Debt Payment Compliance</i>				
2	Debt Payment Compliance, Reporting Year	NA	Was the agency delinquent with its debt service payments at the end of the reporting period? And, was the agency non-compliant with any debt covenants at the end of the reporting period?	
3	Debt Payment Compliance History, 3 Years	NA	Was the agency delinquent with its debt service payments at the end of the reporting period over the last three years?	
<i>Revenue Sufficiency</i>				

³⁹ Staff from the Legislative Auditor's office adds financial data submitted by local authorities throughout the year, as reports are received. The majority of reports are submitted in July and December each year.

⁴⁰ <https://www.lla.la.gov/reports-data/local-government-financials/>

4	Revenue Sufficiency Q-1	Government -Wide	Does the report include a going concern disclosure?	
5	Revenue Sufficiency Q-2	Government -Wide	Does the report include an emphasis-of-matter and/or other-matter paragraph concerning the agency's fiscal stability?	
6	Revenue Sufficiency Q-3	Government -Wide	Was the agency delinquent in paying wages to employees at the end of the reporting period?	
7	Revenue Sufficiency Q-4	Government -Wide	Was the agency delinquent in paying payroll taxes at the end of the reporting period?	
8	Revenue Sufficiency Q-5	Government -Wide	Was the agency delinquent in paying retirement contributions at the end of the reporting period?	
9	Revenue Sufficiency Q-6	Government -Wide	Was the agency delinquent in paying workers' compensation or health insurance premiums at the end of the reporting period?	
10	FAM-1	Government -Wide	(Cash & Cash Equivalents + Investments – (Cash Overdraft + All Other Current Liabilities))/(Charges for Services + General Revenues)	Cash
11	FAM-2	Government -Wide	(Cash & Cash Equivalents + Investments)/(Cash Overdraft + All Other Current Liabilities)	Cash
12	FAM-3	Government -Wide	(Cash & Cash Equivalents + Investments)/(Total Liabilities)	Cash
13	FAM-4	Government -Wide	(Cash & Cash Equivalents + Investments + Charges for Services + Operating Grants & Contributions + Capital Grants & Contributions + General Revenues)/(Total Expenses + Cash Overdraft + All Other Current Liabilities)	Budgetary
14	FAM-5	Government -Wide	Net Position Unrestricted/Total Expenses	Budgetary
15	FAM-6	Government -Wide	Total Assets/Total Liabilities	Cash
16	FAM-7	General	(Cash & Cash Equivalents + Investments + Restricted Assets)/Total Liabilities	Cash
17	FAM-8	General	Total Expenditures/Total Liabilities	Budgetary
18	FAM-9	General	Fund Balance Unassigned/Total Expenditures	Budgetary
19	FAM-10	General	Total Fund Balance/Total Revenues	Budgetary
20	FAM Trend Analysis	NA	Reporting Year FAM Score + (Slope of FAM Score, 5 Years) *3	Long-Run

Source: Data from the Louisiana Legislative Auditor, Advisory Services Section

Figure 12: Fiscally Distressed Local Authorities from Louisiana EWS, 2013

Ascension Consolidated Utilities District No. 1 (Donaldsonville, LA)
City of Allen Park, MI
City of Bogalusa, LA
City of Central Falls, RI
City of Detroit, MI
City of Flint, MI
City of Hamtramck, MI
City of Harrisburg, PA
City of Inkster, MI

City of Vallejo, CA
Morehouse Parish Hospital (Bastrop, LA)
Nassau County, NY
Ozark Mountain Solid Waste District (Mountain Home, AR)
Palm Drive Health Care District (Sebastopol, CA)
Pierce County Housing Authority, WA
Royal Oak Township, MI
Rural Water District No. 1, Cherokee County, Oklahoma (Ft. Gibson, OK)
Sanitary and Improvement District No 512 of Douglas County, NE
Town of Baldwin, LA
Town of Glenmora, LA
Town of Mammoth Lakes, CA
Town of Ridgecrest, LA
<i>Source: Data from the Louisiana Legislative Auditor, Advisory Services Section</i>

From the indicators, the EWS ultimately generates a single Fiscal Administration Risk Model score, which reflects the likelihood that an agency will meet one of the fiscal administration criteria in the near future. See Figure 13 for a scoring example. To produce this score, the EWS first calculates a value for each indicator. Then, it combines these values to generate three scores, one for each fiscal stability criteria. The lowest of these three scores equals the single Fiscal Administration Risk Model score. Local Authorities with a risk score of 15 or lower are considered at “high risk” for fiscal administration in the near future (see Figure 14).

Audit Law Compliance

The value for Indicator 1 is assigned by a point system ranging between zero and 100, with fewer points representing less fiscal stability. The point system places greater weight on more recent activity. For example, if an agency failed to submit an audit in the current reporting year but submitted in the previous two years, it receives 25 points. However, if the agency failed to submit an audit two years ago but submitted in the current reporting year and in the previous year, it receives 50 points. In both instances, the agency submitted two audits over three years’ time, but they received different point values because of the timing of the missing audit. Because there is only one indicator for the audit law compliance criteria, the score for this criterion simply equals the value of Indicator 1.

Debt Payment Compliance

The values for Indicators 2 and 3 are also assigned by a point system ranging between zero and 100. The score for this criterion equals the lower value of the two indicators.

Revenue Sufficiency

The values for Indicators 4 – 9 are assigned by a point system ranging between zero and 100, as is the case for the other financial stability question indicators. The values for the ratio

indicators (Indicators 10 – 19) are initially calculated according to each ratio formula. Then, the values are compared to statewide percentile rankings from a baseline year⁴¹ to generate a percentile ranking for each indicator. Finally, the percentile rankings are averaged for the ten ratio indicators to yield a single ratio percentile ranking (the FAM Score). Indicator 20, the FAM trend analysis indicator, is calculated by using the current-year FAM Score and its previous values (up to four prior years, if available) to project the three-year future FAM Score, as shown by the equation below. Finally, the single score for the revenue sufficiency criterion equals the lowest value of Indicators 4 – 9, the FAM score, and the FAM Trend Analysis Score.

$$\text{FAM Trend Analysis Score} = \text{Reporting Year FAM Score} + (5\text{-Year Slope of FAM scores} * 3)$$

⁴¹ Ratio values from July 1, 2014 – June 30, 2015 provide the percentile ranking values. For example, if a municipality's fund balance to revenue ratio (Indicator 19) equals .884 in 2016, this value is matched to its percentile ranking in the baseline year. If this value was in the 50% percentile in the baseline year, then the municipality would receive a score of 50 points for Indicator 19.

Figure 13: Louisiana Early Warning System for Fiscal Administration Scoring Example

INDICATOR	SCORE	NOTES
<i>Audit Law Compliance</i>		
1	100	Current year and two prior year audits submitted to the State
Audit Law Compliance Criterion Total Score = 100 (equal to Indicator 1)		
<i>Debt Payment Compliance</i>		
2	100	No debt payment delinquency or non-compliance with debt covenants in the reporting year
3	100	No debt payment delinquency over the last three years
Debt Payment Compliance Criterion Total Score = 100 (equal to the lower value of Indicators 2 and 3)		
<i>Revenue Sufficiency</i>		
4	100	No going concern disclosure
5	100	No emphasis-of-matter and/or other-matter paragraph concerning the agency's fiscal stability
6	100	No delinquency in paying wages to employees at the end of the reporting period
7	100	No delinquency in paying payroll taxes at the end of the reporting period
8	100	No delinquency in paying retirement contributions at the end of the reporting period
9	100	No delinquency in paying workers' compensation or health insurance premiums at the end of the reporting period
<i>Revenue Sufficiency Sub-Total Score = 100 (equal to the lowest value of Indicators 4 – 9)</i>		
10	19	Percentile ranking of ratio from baseline year
11	10	Percentile ranking of ratio from baseline year
12	16	Percentile ranking of ratio from baseline year
13	37	Percentile ranking of ratio from baseline year
14	38	Percentile ranking of ratio from baseline year
15	19	Percentile ranking of ratio from baseline year
16	18	Percentile ranking of ratio from baseline year
17	16	Percentile ranking of ratio from baseline year
18	20	Percentile ranking of ratio from baseline year
19	75	Percentile ranking of ratio from baseline year
<i>FAM Score/Revenue Sufficiency Sub-Total Score = 27 (equal to the average of Indicators 10 – 19)</i>		
20	12	Reporting Year FAM Score + (5-Year Slope of FAM scores * 3) = 27 + (-5) ⁴² *3
<i>FAM Trend Analysis Score/Revenue Sufficiency Sub-Total Score = 12 (equal to Indicator 20)</i>		
Revenue Sufficiency Criterion Total Score = 12 (equal to the lowest Revenue Sufficiency Sub-Total score)		
FISCAL ADMINISTRATION RISK MODEL SCORE = 12 (equal to the lowest of the three criterion scores)		

⁴² This example assumes a (-5) five-year slope of FAM scores.

Figure 14: Interpretation of Fiscal Administration Risk Score, Louisiana Early Warning System for Fiscal Administration	
Risk Score (Higher is Better)	Risk of meeting the criteria for fiscal administration
40 – 100	Low Risk
30 – 40	Low to Moderate Risk
15 - 30	Moderate to High Risk
0 - 15	High Risk
0	<p>Likely Meets Criteria</p> <p>A zero (0) risk score is assigned if one of the following conditions exists as each indicate the entity may meet one (or more) of the criteria for fiscal administration:</p> <ul style="list-style-type: none"> • The Agency was delinquent in paying debt service during the fiscal year (per answer on FIW). • The Auditor includes language in the audit opinion or note disclosures about the Agency’s ability to continue as a Going Concern (e.g. insufficient revenue). • The Agency, for three consecutive years, failed to submit its required annual audit report to the LLA (either submitting a report containing a disclaimer and/or not submitting a report).
<i>Source: Louisiana Legislative Auditor, “Early Warning System for Fiscal Administration Manual,” September 2018.</i>	

Implementation

Since it was established, the EWS has identified 22 local authorities as in “high risk” of fiscal administration and the Legislative Auditor has subsequently supported them to improve financial stability. This support consists of a more detailed follow-up assessment of fiscal stability, which is followed by varying degrees of guidance or the initiation of fiscal administration. Staff from the Advisory Services Section report that they would have provided support to 13 of these authorities without the EWS system, as their direct relationships with local officials informed them of fiscal challenges. However, staff credits the EWS system with its support to nine local authorities, which were not otherwise on its radar. In most instances, fiscal administration has been avoided. Three of the 22 local authorities flagged by the EWS system entered fiscal administration. In 2017, a fourth local authority was placed under fiscal administration, which did not appear as high risk in the EWS system. The agency was a small, rural town that suddenly incurred a large amount of debt to pay for water system improvements. This example points to two trends identified by staff from the Advisory Services Section. First, a challenge with lagged data. The time from the local financial action to EWS analysis ranges between six and eighteen months. Thus, problematic financial activity may not appear in the EWS model in a timely manner. Staff asserts that more timely data will create a more accurate model. Second, staff reported that recent local financial instability has centered around dated water system infrastructure. The State currently has a Rural Water Infrastructure Task Force that is assisting approximately 30 struggling local authorities, half of which are also at high risk of fiscal administration in the EWS model.

Colorado Fiscal Stability Initiative

- **Established in:** 2015
- **Administered by:** Colorado Department of Local Affairs
- **Data Source:** submitted electronically as local governments submit annual audits to the State
- **Governments Analyzed:** 334 local authorities, including counties, cities, and towns
- **Publication:** Operates as an internal system; does not publicize data sets or analysis
- **Number of Indicators:** 12
- **Indicator Solvency-Type Measures:** Budgetary, Long-Run and Service-Level
- **Purpose:** Seeks to identify local authorities that are particularly fiscally vulnerable to local shocks, including those from natural disasters and economic shifts, in order to connect them with State resources.

Context

In 2013, Colorado experienced historic floods that extended across 24 counties and caused nearly \$4 billion in damages.⁴³ While federal funds were dedicated to rebuilding affected communities, some local governments in Colorado were not fiscally positioned to receive and manage the funding. As a result, the Colorado Department of Local Affairs (DOLA) assisted local governments in managing the rebuilding process. Subsequently, DOLA initiated an effort to create a system for detecting local authorities that might be particularly fiscally vulnerable. DOLA convened a system development team. The team reviewed research and held policy discussions to develop the Colorado Fiscal Stability Initiative, which launched in 2016.

Colorado's economic climate is defined by growth. The state's population nearly doubled since 1980 as did home values, as shown in Figure 15. Unemployment is below the national average. Household incomes are higher than the country on average and have been for the last forty years. Furthermore, over the last decade, public spending has risen, as shown in Figure 16. Both federal spending per capita and state and local spending per capita rose at rates greater than national averages. At the same time, Colorado's poverty rate diminished by more than half.

Figure 15: Colorado Population, Housing Prices, Income, and Unemployment, 1980 – 2017
\$ Values in 2017 Inflation Adjusted Dollars

	Population	Median Home Value	Median Household Income	Unemployment Rate
1980	2,889,964	\$180,637	\$59,809	5.80%
1990	3,294,394	\$150,460	\$56,062	5.20%

⁴³ John Aguilar, "We're about to wake up: Victims of Colorado's 2013 flood look to end of recovery," *The Denver Post*, September 9, 2018, <https://www.denverpost.com/2018/09/09/colorado-floods-2013-recovery/>, accessed February 10, 2019.

2000	4,301,261	\$237,149	\$68,860	2.80%
2010	5,029,196	\$265,965	\$67,866	8.70%
2017	5,607,154	\$348,900	\$69,117	2.70%
Change 1980-2017	94.02%	93.15%	15.56%	-53.45%
USA 2017	325,147,121	\$217,600	\$61,372	4.40%
USA Change 1980-2017	43.52%	63.67%	26.64%	-38.89%
Source: Data from the U.S. Census Bureau and the U.S. Department of Labor Bureau of Labor Statistics				

Figure 16: Colorado Federal, State & Local Spending, 2006 – 2015 \$ Values in April 2019 Inflation Adjusted Dollars				
	Population	Federal Spending/Capita	State & Local Spending/Capita	Total Spending/Capita
2006	4,720,423	\$9,205.22	\$8,369	\$17,574
2007	4,803,868	\$8,800.19	\$8,731	\$17,531
2008	4,889,730	\$9,308.88	\$8,823	\$18,132
2009	4,972,195	\$11,006.69	\$9,087	\$20,094
2010	4,887,061	\$11,949.37	\$8,980	\$20,929
2011	4,966,061	\$11,241.79	\$8,923	\$20,165
2012	5,042,853	\$11,299.31	\$8,597	\$19,896
2013	5,119,329	\$10,477.30	\$8,487	\$18,964
2014	5,197,580	\$11,089.70	\$8,843	\$19,933
2015	5,278,906	\$11,106.38	\$9,428	\$20,534
Change 2006-2015	11.83%	20.65%	12.65%	16.84%
USA 2015	320,742,673	\$11,338.67	\$9,498	\$20,837
USA Change 2006-2015	7.49%	14.00%	5.84%	10.13%
Source: Data from the U.S. Census Bureau, the Tax Policy Center of the Urban Institute & Brookings Institution, https://www.taxpolicycenter.org/statistics/state-and-local-general-expenditures-capita (accessed April 15, 2019), and the Council of State Governments, http://knowledgecenter.csq.org/kc/content/federal-spending-states-2015 (accessed April 16, 2019).				

The Colorado Fiscal Stability Initiative (FSI) seeks to identify local authorities that are particularly fiscally vulnerable to local shocks, including those from natural disasters and economic shifts, in order to connect them with State resources. Thus, the system is designed to identify local authorities that show signs of financial and/or economic instability. DOLA developed the system in 2015. It convened regular meetings with nine staff members across

multiple divisions within the department over a six-week timeframe⁴⁴. It selected indicators through qualitative research and internal policy discussions. Its indicators for measuring budgetary and long-run solvency were chosen from its research of common practices. While some of its measures for service-level solvency were chosen from research, others⁴⁵ were selected according to staff observations of local-level dynamics.

The system is used to analyze the stability of 334 local authorities, including counties, cities, and towns, to identify local governments for follow-up assistance from the State.

Methodology

The FSI assesses the financial and economic stability of 334 local authorities by analyzing financial, demographic, and economic data for each authority. These local governments consist of counties, cities, and towns. The Colorado State Legislature requires that all local governments submit annual budgets and audits to the State. To conduct the FSI analysis, DOLA collects audit data annually and supplements it with demographic and economic data from the U.S. Census Bureau, the U.S. Department of Labor, and the State of Louisiana Demography Office. The State publicizes annual budgets and audits for local governments on the DOLA website⁴⁶.

The FSI contains 12 indicators, as shown in Figure 17, which seek for signals of municipal financial or economic instability. The financial indicators (Indicators 1 – 4) consist of simple ratios that gauge operating position, debt load, and intergovernmental revenue share. The other eight indicators examine land use, local demographics, and the diversity of the local economy. These indicators are included in the analysis because Colorado is largely not looking for existing fiscal distress, as is the case in many other states, but for more for potential triggers of fiscal distress, such as an under-educated population, a workforce that is reliant upon a single employer, and/or short-term, cash-oriented local government financial practices.

Figure 17: Colorado Fiscal Stability Initiative Indicators					
	DESCRIPTION	FUND TYPE	QUESTION/FORMULA	BENCHMARK	SOLVENCY MEASURE
1	3-Year Asset-Liability Ratio	Government-Wide	3-Year Assets/3-Year Liabilities	100%	Budgetary

⁴⁴ Rachel Harlow-Schalk, *Deputy Director, Colorado Department of Local Affairs Division of Local Government*, interview by Natalie Pruett and Shu Wang, *Center for Local Government & Policy, Michigan State University Extension*, January 28, 2019.

⁴⁵ Specifically, Indicators 5, 10, and 11. Staff observed that reliance on large single employers and/or industries place municipalities in vulnerable positions.

⁴⁶ https://dola.colorado.gov/dlg_portal/filings.jsf;jsessionid=RS-CRUC8qO7dE3eAlpZO_TWDMENCYrPcNMMXAuzJ.dolaapp12?id=01001&category=1&jfwid=RS-CRUC8qO7dE3eAlpZO_TWDMENCYrPcNMMXAuzJ%3A1

2	Debt per Capita Ratio	Government-Wide	Total Debt/Adult Population	\$1,778 (cities) \$304 (counties)	Long-Run
3	Intergovernmental Revenue Dependence	Government-Wide	Intergovernmental Revenue/Total Revenue	25% (cities) 50% (counties)	Long-Run
4	Instances of Operating Deficits over 3 Years	Government-Wide	Count number of operating deficits in current year and two prior year	2	
5	Non-Res./Com. Property Classification Concentration	NA	% of Total Land Acreage that is Non-Residential or Non-Commercial	30%	Service-Level
6	Percentage of Population in Poverty and/or 65 Years+	NA	% of population in Poverty and/or Age 65 Years or Older	35%	Service-Level
7	Educational Attainment	NA	% of persons with bachelor's degree+	20%	Service-Level
8	Household Population Change	NA	Change in household population size	0	Service-Level
9	Labor force population change	NA	% change in labor force population (age 25-44)	0	Service-Level
10	Single Large Employer	NA	% of labor force working for a single employer	10%	Service-Level
11	Local Government Employment	NA	% of labor force working for local government	25%	Service-Level
12	Jobs Change, 2002 -2014	NA	The change in the number of jobs between 2002 and 2014	0	Service-Level
<i>Source: Data from the Colorado Department of Local Affairs Division of Local Government Services</i>					

From the indicators, the FSI generates a stability ranking, which reflects the degree to which the local government may be vulnerable to a natural disaster or economic shock, relative to other local governments in Colorado. To produce this ranking, the FSI first calculates a value for each indicator. Then, it compares each indicator value against a benchmark value, as shown in Figure 17. The benchmark values were set by DOLA staff by a combination of data analysis, staff observations, and organizational capacity⁴⁷. If an indicator value surpasses the benchmark value, then the municipality is given a point; all of the indicators are weighted equally. Then, the points are tallied, and the local governments are ranked. If all of a municipality's indicator

⁴⁷ "The benchmarks we settled on were informed by a combination of the factors you mentioned: statewide quartiles, intuition, perceived risk associated with the indicator, and national/industry literature. Further, for our purpose which might be different than some other states, we sought to use the indicators and factors to identify a handful of candidates within each of the Division's geographic field staff regions. Ultimately for this first initiative we settled on this combination of indicators and benchmarks to identify those priority candidates," said Cynthia Thayer, Colorado Department of Local Affairs Division of Local Government, in correspondence with Natalie Pruett, Center for Local Government & Policy, Michigan State University Extension, June 02, 2019.

values surpass the benchmark values, then it will receive a score of 12 points and will rank at the top of the instability ranking. If none of its indicator values surpass the benchmark values, then it will receive a score of 0 points and will rank at the bottom of the instability ranking.

Implementation

The FSI was used, in part⁴⁸, to identify 18 local governments for state assistance as part of the DOLA Community Financial Best Management Practices pilot program. Through the program, DOLA works with local governments to complete inventories of financial practices. Then, based on the inventory results, it assists them in developing and implementing improvement plans that work towards aligning practices with DOLA's Financial Best Management Practices Standards, as shown in Figure 18. Capital Improvement Plans have been a major point of emphasis in this work. DOLA developed a guide specifically on creating Capital Improvement Plans (CIPs). According to State officials, many local governments, particularly small authorities, are developing CIPs for the first time.

Figure 18: DOLA Community Financial Best Management Practices

Financial policies

Budget policy
Capital improvement policy Debt policy
Expenditure policy Investment policy
Reserve policy
Revenue policy

Statewide requirement

Annual adopted budget
Compliance with statewide budget requirements

Management and operations

Implement system(s) to monitor, measure, and evaluate performance (e.g., budget-to- actual, financial condition, program performance)
Asset inventory
Capital improvement plan
Dedicated finance staff
Professional manager or town administrator Define and implement budget process

Source: Colorado Department of Local Affairs Division of Local Government

⁴⁸ DOLA regional manager expertise and familiarity with local circumstances played a part too, according to DOLA staff.

V: RATIO ANALYSIS, OBSERVATIONS, AND RECOMMENDATIONS

In each of the four state systems, the majority of the indicators consist of ratios – fractions that measure financial, social, or economic activity within a locale. This section analyzes in more detail and compares the different approaches taken by the four states in selecting ratio indicators and evaluating municipal values.

Figure 19: Fiscal Early Warning System Methodology Comparison				
	Colorado	Louisiana	Ohio	Pennsylvania
Established ⁴⁹	2015	2013	2017	2017
Type of Governments Analyzed ⁵⁰				
<i>Counties/Parishes</i>	✓	✓	✓	
<i>Cities</i>	✓	✓	✓	✓
<i>Towns, Villages, Townships, Boroughs</i>		✓		✓
<i>Other</i>		✓		
Total Number of Indicators ⁵¹	12	20	17	15
Solvency-Type Analyzed				
<i>Cash</i>		✓	✓	✓
<i>Budgetary</i>	✓	✓	✓	✓
<i>Long-Run</i>	✓	✓	✓	✓
<i>Service-Level</i>	✓		✓	✓
Level vs. Change Indicators ⁵²	Level	Both	Both	Level
Benchmarks				
<i>Individual Local Government Past Values</i> ⁵³			✓	
<i>Statewide Past Values</i> ⁵⁴	✓	✓	✓	✓
<i>Standards from Research</i>	✓		✓	✓
Composite Score ⁵⁵	Yes	Yes	No	Yes

⁴⁹ The year that the current system methodology was established. Pennsylvania's system was established in 1987 but completely revamped in 2017.

⁵⁰ Types of governments that are included in the ratio analysis.

⁵¹ Number of all indicators in each state system – both ratio indicators and others.

⁵² See page 44 for an explanation of the distinction between level and change indicators.

⁵³ Local government self-comparison – compares a current ratio value for a local government to its previous value(s)

⁵⁴ Historic comparison across Local governments – compares a current ratio value for a local government to statewide previous value(s)

⁵⁵ Yes for states that combine ratio values for each local government to generate a score that represents an overarching conclusions regarding its fiscal health, as opposed to states (No) that asses each individual ratio only. See page 46 for an explanation of scoring

Publication ⁵⁶				
<i>Indicator Results</i>	No	No	Yes	No
<i>Local Data</i>	No	Yes	Yes	No
<i>Source: Data from the Pennsylvania Department of Community and Economic Development, the Ohio Auditor of State, the Louisiana Legislative Auditor Advisory Services Section, and the Colorado Department of Local Affairs Division of Local Government Services</i>				

Selecting Ratios

Solvency-Type Measures

Each state chooses ratios amidst its specific context. The legal framework, economic climate, and purpose varies from state to state. Thus, the focus of each system varies. This focus generally drives the process of selecting ratios. Colorado has greater economic growth and less fiscal hardship than the country on average. Its system is motivated primarily by a desire to identify local authorities that are more vulnerable to shocks in otherwise stable conditions, such as natural disasters and economic shifts. As a result, its ratios focus on measuring longer-term fiscal health. Ten of the state's eleven ratios measure long-run health, as shown in Figure 20. The state does not measure cash solvency whatsoever. Louisiana, on the other hand, operates amidst a challenging economic climate that has seen a recent increase in the number of local governments placed under fiscal administration. It is charged with minimizing this number moving forward by identifying local governments most likely to be in fiscal distress in the near future. Thus, its ratios exclusively measure cash and budgetary solvency. Ohio has a two-pronged purpose, to prevent "fiscal crisis" and to, "elevate the discussion around local government financing and budgeting."⁵⁷ In response, its ratios measure a combination of short-term fiscal distress (nine ratios) and long-term fiscal health (seven ratios). Similarly, Pennsylvania is tasked with identifying fiscally distressed municipalities before, "they reach crisis proportions."⁵⁸ However, Pennsylvania's legal definition of "fiscal distress" encompasses not only failures to meet debt and financial obligations but also deficiencies in providing "for the health, safety and welfare of their citizens."⁵⁹ In other words, service-level solvency considerations are included in Pennsylvania's definition of fiscal distress. As result, Pennsylvania selected ratios to measure all four solvency types. It chose select ratios that are typical for measuring cash, budgetary, and long-run solvency. From there, nine of its fifteen ratios measure service-level solvency.

Figure 20: Ratio Indicators by Solvency-Type Measure

⁵⁶ Yes for states that publish indicator results and/or ratio analysis data. Louisiana and Ohio both do so by posting materials to state websites.

⁵⁷ Financial Health Indicators Update: An Overview" *Ohio State Legislature*, <https://www.ohioauditor.gov/FHI/fhi%20update%20OVERVIEW.pdf>, accessed February 21, 2019.

⁵⁸ Pennsylvania State Legislature, *Municipal Financial Recover Act of 1987*, <https://www.legis.state.pa.us/WU01/LI/LI/US/HTM/1987/0/0047..HTM> (accessed January 21, 2019).

⁵⁹ Ibid

Solvency-Type Measure	Colorado	Louisiana	Ohio	Pennsylvania	All
Cash	0	5	1	1	7
Budgetary	1	5	8	3	17
Long-Term	2	0	6	2	10
Service-Level	8	0	1	9	18
Total	11	10	16	15	52
<i>Source: Data from the Pennsylvania Department of Community and Economic Development, the Ohio Auditor of State, the Louisiana Legislative Auditor Advisory Services Section, and the Colorado Department of Local Affairs Division of Local Government Services</i>					

Recommendation: Consider incorporating indicators for each solvency type. When doing so, distinguish between short and long-term distress. This will provide a more complete picture of fiscal health, which is useful for understanding the scale of fiscal distress. A government that is fiscally-distressed in the short-term due to its fund balance ratio but has a healthy long-term net position is in a much different situation than one that is unhealthy in both respects. Data for Colorado, Ohio, and Pennsylvania demonstrates this point, as shown in Figure 21. Both Pennsylvania and Ohio’s systems detects signs of fiscal distress in the vast majority of its governments. However, for Pennsylvania, many show signs of long-term distress only. Of its local governments that show signs of short-term fiscal distress, most also show signs of long-term distress (“Both”), but some do not (“Short-Term Only”). Nearly all of Ohio’s local governments show signs of both short- and long-term fiscal distress. Because Pennsylvania and Ohio’s systems contains ratios for each of the four solvency measures, they are able to identify the scale and nature of distress in greater detail. Colorado’s system also measures both short and long-term distress. Colorado has only three instances of short-term fiscal distress, all of which show signs of long-term distress also (“Both”). Because of Colorado’s strong economic climate, this low-level of short-term fiscal distress is not surprising. However, even amidst its context of economic growth, the majority of Colorado’s local governments show signs of long-term fiscal distress, either in the form of long-run or service-level solvency.

Figure 21: Incidents ⁶⁰ of Fiscal Distress from Ratio Indicators, Short vs. Long Term				
State	None	Short-Term Only (Cash and/or Budgetary Solvency)	Long-Term Only (Long-Run and/or Service-Level Solvency)	Both
CO	53	0	278	3
OH	150	21	95	1,079
PA	1,662	1,009	8,152	7,111
Source: Data from the Pennsylvania Department of Community and Economic Development, the Louisiana Legislative Auditor Advisory Services Section, and the Colorado Department of Local Affairs Division of Local Government Services				

Volume

The total volume of ratios is comparable between the four state systems, as shown in Figure 20. Louisiana has the fewest with 10 and Ohio has the most with 16. However, the proportion of ratios for each solvency measure varies quite a bit from one state to another. Both Colorado and Pennsylvania's systems contain very few ratios for measuring cash, budgetary, and long-run solvency and devote the majority to measuring service-level solvency. All but two of the ratios in Ohio's system measure either budgetary or long-run solvency. Louisiana's ten ratios, which measure only short-term fiscal health, are evenly split between measuring cash and budgetary solvency. Figure 22 and Figure 23 present data that examines the extent to which the number of ratios impacts the ratio results. Do different ratios measuring the same type of solvency generate the same rates of distress? The data for the states of Colorado, Ohio, and Pennsylvania indicates that different ratios for the same type of solvency can give different fiscal distress results. For example, Pennsylvania's system has three ratios measuring budgetary solvency (PA Indicators 1 – 3). As shown in Figure 23, Indicator 2 detects fiscal distress only 7% of the time while Indicator 3 does so 38% of the time. Colorado's system has two measures for long-run solvency (CO Indicators 2 and 3). While they both detect relatively equal levels of distress (25% and 28%), a deeper analysis of the data reveals that the overlap between these two ratios is less than it appears. Indicator 2 detects distress in 83 local governments and Indicator 3 detects distress in 95. However, distress is detected for both indicators in only 23 local governments. By incorporating both ratios into its system, Colorado identifies distress for more local governments than it would have by choosing one or the other. Thus, the data demonstrates that incorporating more indicators will likely generate more signals of distress and vice versa.

⁶⁰ Incidents are defined as at least one signal of fiscal distress for a given local government in a given year. For Colorado, data is provided for each local government for only one year. For Pennsylvania, data was provided for each local government for seven years (2011 – 2017). For Ohio, data was provided for each local government for four years (2015 – 2018). Louisiana is excluded from this analysis as its system does not incorporate fiscal distress benchmarks for each ratio but measures fiscal distress through composite scoring of all ratios.

Figure 22: Fiscal Distress Rates for Ratio Indicators by Solvency-Type Measure ⁶¹				
	Colorado	Ohio	Pennsylvania	All
<i>Number of Indicators</i>				
Cash	0	1	1	2
Budgetary	1	8	3	12
Long-Run	2	6	2	10
Service-Level	8	1	9	18
<i>Minimum Percentage of Government Units with Fiscal Distress Rates</i>				
Cash	-	7%	2%	2%
Budgetary	1%	5%	7%	1%
Long-Run	28%	9%	19%	9%
Service-Level	15%	52%	1%	1%
<i>Maximum Percentage of Government Units with Fiscal Distress Rates</i>				
Cash	-	7%	2%	7%
Budgetary	1%	39%	38%	39%
Long-Run	31%	40%	23%	40%
Service-Level	69%	52%	62%	69%
<i>Average Percentage of Government Units with Fiscal Distress Rates</i>				
Cash	-	7%	2%	5%
Budgetary	1%	18%	20%	17%
Long-Run	30%	20%	21%	22%
Service-Level	30%	52%	15%	18%
<i>Source: Data from the Pennsylvania Department of Community and Economic Development, the Ohio Auditor of State, and the Colorado Department of Local Affairs Division of Local Government Services</i>				

⁶¹ Louisiana is excluded as its methodology does not align with the analysis. Its system does not incorporate fiscal distress benchmarks for each ratio but measures fiscal distress through composite scoring of all ratios.

Figure 23: Summary Statistics and Fiscal Distress Figures for Ratio Indicators⁶²

Indicator		Solvency-Type Measure	Description	Observations	Minimum	Maximum	Median	Average	Standard Deviation	Fiscal Distress Incidents ⁶³	
CO	1	Budgetary	3-Year Asset-Liability Ratio	334	0.54	266.92	6.98	13.40	25.36	3	1%
CO	2	Long-Run	Debt per Capita Ratio	271	2	247,891	943	2,925	17,734	83	31%
CO	3	Long-Run	Intergovernmental Revenue Dependence	334	0%	94%	20%	25%	18%	95	28%
CO	5	Service-Level	Non-Res./Com. Property Classification Concentration	334	0%	76%	0%	6%	16%	47	15%
CO	6	Service-Level	Percentage of Population in Poverty and/or 65 Years+	334	14%	51%	28%	31%	8%	112	34%
CO	7	Service-Level	Educational Attainment	334	7%	59%	26%	30%	14%	83	25%
CO	8	Service-Level	Household Population Change	334	-1.86	4.08	0.89	0.79	1.30	96	29%
CO	9	Service-Level	Change in Labor Force Population	334	-4.33	2.46	-0.80	-0.65	1.58	229	69%
CO	10	Service-Level	Single Large Employer	334	2%	38%	7%	9%	6%	83	25%
CO	11	Service-Level	Local Government Employment	334	3%	59%	15%	18%	11%	67	20%
CO	12	Service-Level	Jobs Change, 2002 -2014	334	-1,394	55,205	596	10,611	16,859	81	24%
LA	10	Cash	FAM-1	1,672	0%	43,139,750,000%	737%	165,931,879%	1,604,783,235%	NA	NA
LA	11	Cash	FAM-2	1,331	0	68,181,400	0.52	51,227	1,868,860	NA	NA
LA	12	Cash	FAM-3	1,664	0	167,054,500	2.2	906,803	7,110,340	NA	NA
LA	13	Budgetary	FAM-4	1,672	0%	1,872,710,000%	148%	1,120,330%	45,798,613%	NA	NA
LA	14	Budgetary	FAM-5	1,667	-721%	658,289,960,000%	58%	533,075,500%	16,629,341,016%	NA	NA

⁶² Figure 23 presents summary statistics for the ratio analysis results for all four states. Data was supplied by each state, as cited in the Figure source. The number of observations for each state equals the number of local government ratio analyses completed. For Colorado and Louisiana, data is provided for each local government for only one year. For Pennsylvania, data was provided for each local government for seven years (2011 – 2017). For Ohio, data was provided for each local government for four years (2015 – 2018).

⁶³ These columns provide more granular data than that presented in Figure 21. An incident is a ratio value for a single local government in a given year that exceeds the state-established benchmark. The integer values equal the count of the number of ratio values that exceeded benchmarks. The percentages equal the number of values for a given ratio that exceed the benchmark (the integer value divided by the observation value). Note that for Ohio some indicators have multiple ratio values – Indicators 1, 2, 5, 6 and 7. Although Ohio calculates multiple ratios for these indicators, it then uses the multiple values to draw a single conclusion for the indicator regarding fiscal stress, as explained fully in Appendix III (FHI Report Descriptions). Thus, single fiscal distress counts and percentages are provided here for each of Ohio’s indicators. For Ohio, an incident is counted if the ratio exceeded the “critical” or “cautionary” benchmark. Louisiana is excluded as its methodology does not align with the analysis. Its system does not incorporate fiscal distress benchmarks for each ratio but measures fiscal distress through composite scoring of all ratios.

LA	15	Cash	FAM-6	1,672	13%	47,753,080,000%	802%	240,065,635%	1,865,078,039%	NA	NA
LA	16	Cash	FAM-7	1,331	0	431,397,500	12	1,701,324	16,405,608	NA	NA
LA	18	Budgetary	FAM-9	1,300	-7.21	493,841,300	0.69	432,429	13,825,673	NA	NA
LA	19	Budgetary	FAM-10	1,329	-19,168	1,113,841,300	0.89	840,461	30,553,529	NA	NA
OH	1a	Budgetary	Equity	1,299	-888,822,000	410,960,000	6,666,011	11,191,335	50,369,059	511	39%
OH	1b	Budgetary	Equity 1-Year Change	1,299	-43,900%	5,200%	6%	-25%	1,255%		
OH	2a	Budgetary	Unassigned Fund Balance	1,299	-4,470,003	215,683,143	4,014,888	8,519,760	18,747,853	469	36%
OH	2b	Budgetary	Unassigned Fund Balance 1-Year Change	1,299	-42,827,300,000%	317,372,400,000%	7%	632,779,260%	10,739,009,200%		
OH	3	Budgetary	Equity 3-Year Change	1,299	-9,564%	14,458%	17%	41%	617%	124	10%
OH	4	Budgetary	Unassigned Fund Balance 3-Year Change	1,299	-182,800,000,000%	224,829,400,000%	16%	370,246,355%	9,789,782,387%	68	5%
OH	5a	Budgetary	Fund Balance Strength	1,299	-38%	222%	42%	50%	33%	135	10%
OH	5b	Budgetary	Fund Balance Strength 3-Year Change	1,299	-103%	94%	3%	3%	16%		
OH	6a	Long-Run	Property Tax Revenue Dependency	1,270	0%	90%	10%	16%	17%	285	22%
OH	6b	Long-Run	Property Tax Revenue Dependency 1-Year Change	1,270	-99%	1,578%	2%	9%	89%		
OH	6c	Long-Run	Property Tax Revenue Dependency 3-Year Change	1,266	99%	1,406%	5%	13%	83%		
OH	7a	Long-Run	Tax Revenue Dependency	1,187	20%	91%	62%	62%	14%	252	21%
OH	7b	Long-Run	Tax Revenue Dependency 1-Year Change	1,187	-53%	128%	3%	4%	11%		
OH	7c	Long-Run	Tax Revenue Dependency 3-Year Change	1,172	-53%	237%	12%	14%	19%		
OH	8	Budgetary	Revenue-Expense Ratio	1,299	-0.45	0.84	0.13	0.16	0.16	301	23%
OH	9	Long-Run	Net Expense Coverage by Revenue	1,299	-687%	5,417%	105%	115%	156%	517	40%
OH	10	Long-Run	Intergovernmental Revenue Share	1,299	0%	40%	7%	8%	5%	120	9%
OH	11	Service-Level	Condition of Capital Assets	1,200	5%	278%	50%	51%	14%	626	52%
OH	12	Long-Run	Debt Service to Revenue	1,299	0%	88%	4%	7%	8%	209	16%

OH	13	Budgetary	Average Daily Expenses Ratio-1	1,299	-592	916	101	126	138	183	14%
OH	14	Budgetary	Average Daily Expenses Ratio-2	1,299	-146	1,113	126	166	148	127	10%
OH	15	Cash	Average Daily Expenses Ratio-3	1,299	0	1,092	149	195	163	85	7%
OH	16	Long-Run	Debt Service Percentage	1,203	-317%	648%	20%	29%	41%	152	13%
PA	1	Budgetary	Fund Equity-1	17,533	-3.38	389.31	0.52	0.86	3.13	2,750	16%
PA	2	Budgetary	Fund Equity-2	17,537	-72.12	1.00	1.00	0.88	0.88	1,218	7%
PA	3	Budgetary	Operating Position	17,545	0.07	63.94	0.98	1.01	0.56	6,604	38%
PA	4	Long-Run	Long-Term Debt	10,358	-0.14	15.87	0.38	0.81	1.25	1,967	19%
PA	5	Cash	Liquidity	10,339	0.00	526,328.00	1.43	68.99	5,213.45	243	2%
PA	6	Service-Level	Public Safety	17,500	0.00	4.76	0.18	0.23	0.18	1,432	9%
PA	7	Long-Run	Pension Position	8,243	17	11,144	92	109	220	1,897	23%
PA	8	Service-Level	Population Age	17,905	1.20%	92.50%	17.40%	17.95%	5.93%	11,142	62%
PA	9	Service-Level	Poverty Rate	17,327	0.20%	69.00%	6.80%	8.33%	6.13%	259	1%
PA	10	Service-Level	Educational Attainment	17,834	0.90%	85.60%	17.15%	20.64%	12.92%	5,283	30%
PA	11	Service-Level	Unemployment Rate	17,706	0.20%	65.80%	6.50%	7.21%	3.79%	516	3%
PA	12	Service-Level	Median Household Income	17,760	\$2,500	\$228,958	\$50,694	\$53,907	\$18,095	402	2%
PA	13	Service-Level	Median Housing Values	17,873	\$20,000	\$964,600	\$132,900	\$148,648	\$79,946	790	4%
PA	14	Service-Level	Residential Vacancy Rate	17,705	0.20%	100.00%	10.10%	14.82%	15.24%	3,769	21%
PA	15	Service-Level	Owner-Occupancy Rate	17,914	9.10%	100.00%	81.00%	77.35%	13.26%	571	3%

Source: Data from the Pennsylvania Department of Community and Economic Development, the Ohio Auditor of State, the Louisiana Legislative Auditor Advisory Services Section, and the Colorado Department of Local Affairs Division of Local Government Services

Recommendation: Choose a direction in which to err. If one wants to err on the side of underestimating fiscal distress, then choose fewer ratios. If one wants to err on the side of overestimating fiscal distress, then choose more ratios. Literature and research offer reliable ratios for measuring cash, budgetary, and even long-run solvency. There is much less consensus around ratios for measuring service-level solvency. Consider selecting fewer ratios for measuring cash, budgetary, and long-run solvency and more ratios for measuring service-level solvency.

Level vs. Change

Ohio and Louisiana's ratios are comprised of a combination of level ratios (those that measure a static position) and change ratios (those that measure a change in a position over time). Colorado and Pennsylvania's systems consist of level ratios. Incorporating both level and change ratios can be useful. Doing so can indicate not only a government's status but also its trajectory. "For instance, a unit's fund balance may be negative in the current year as well as during the previous two years, but if the balance currently is less negative than in previous years, the unit's fiscal condition may be improving. In addition, a unit may appear to be fiscally healthy because it has had a positive fund balance over the previous two years, but it might be heading for fiscal distress if this number is trending downward quickly. Both of these concerns can be captured by a mix of level ratios as well as change ratios."⁶⁴

Recommendation: Consider incorporating both level and change ratios to measure both the status and trajectory of fiscal health. In Ohio's system, Indicators 6 measures property tax revenue dependency. The average level value for all local governments is 16% (Indicator 6a). However, the average three-year change in the indicator is 13% (Indicator 6c). This means that property tax revenue dependency is nearly doubling every three years for Ohio local governments. The extent to which a local government follows or deviates from these trends reveals the status and trajectory of its fiscal position. This example from Ohio demonstrates that incorporating both level and change ratios provides a more detailed depiction of fiscal health.

Setting Benchmarks

Once a state selects ratios for measuring fiscal health, it must then set standard values or benchmarks against which to evaluate the ratio values for municipalities. Benchmarks for state fiscal health monitoring systems are derived in a variety of ways. Quite often, benchmarks are set equal to previous statewide values. Such is largely the case in Pennsylvania. The benchmark for 12 of the state's 15 indicators equals the median value for municipalities that recently met the state's criteria for fiscal distress. For example, the median household income for

⁶⁴ Tina Plerhoples and Eric Scorsone, "An Assessment of Michigan Local Government Fiscal Indicator System," *Michigan Senate Fiscal Agency*, September 2010, <http://www.senate.michigan.gov/sfa/publications%5Cissues%5Clocalgovfiscalindicatorsystem%5Clocalgovfiscalindicatorsystem.pdf>, accessed November 23, 2018.

municipalities that recently had fiscal distress declarations in Pennsylvania was \$29,083. Thus, the benchmark for Indicator 12 in Pennsylvania's system (median household income) is \$29,083. When a municipality has a median household income equal to or less than this benchmark value, it is seen as a signal for potential fiscal distress. Benchmarks are also commonly set according to research findings and policy analysis. The benchmark for Indicator 1 in Pennsylvania's system, which measures fund equity, is set equal to a "best practice" value prescribed by the Government Finance Officers Association. In some cases, benchmarks are set by comparing values for each municipality to itself over time, rather than comparing values for different municipalities to each other. Change ratios, previously described on page 40, take this approach.

Recommendation:

Set benchmarks that are meaningful and align with the purpose of the fiscal monitoring system. As an official from the City of Seattle explained regarding its' fiscal monitoring system, "When I present this information to Council, they expect me to be able to clearly explain what it means to them." Benchmarks should represent fiscal health distinctions between municipalities. If the administrator of a system cannot explain the distinction between municipalities that are above the benchmark and those that are below it, then the benchmark should be evaluated. However, this does not suggest that fiscal health conditions are binary or that ratio values and benchmarks can easily pinpoint fiscal health and a lack thereof. On the contrary, fiscal health conditions lie along a spectrum. Some municipalities are more fiscally healthy, and some are less. As a result, fiscal ratio values also often lie along a spectrum. Thus, the challenge in setting benchmarks is deciding where along the spectrum to draw the line. Setting more demanding benchmarks means fewer municipalities will meet them and vice versa. For example, in Pennsylvania's system, Indicator 14 measures service-level solvency through a municipality's residential vacancy rate. The benchmark for the ratio is 18.9, which equals the median value for municipalities that recently met the criteria for fiscal distress. Currently, municipalities exceeded the benchmark 3,769 times, or 21% of the time. If the benchmark were to decrease by one percentage point to 17.9, then municipalities would exceed it 284 more times (4,053 times in total). Similarly, if the benchmark were to increase by one percentage point to 19.9, then municipalities would exceed it 286 fewer times (3,483 times in total). Thus, as is the case with selecting the volume of ratios to include, when setting ratio benchmarks, one must choose a direction in which to err. If one wants to err on the side of underestimating fiscal distress, then set less demanding benchmarks. If one wants to err on the side of overestimating fiscal distress, then set more demanding benchmarks.

Scoring

States employ an array of scoring methods to assess municipal fiscal health. These scoring methods generally fall into two categories: (1) those that generate composite scores for each municipality that represent overarching conclusions regarding fiscal health and (2) those that

asses each individual ratio only. Louisiana, Pennsylvania, and Ohio are examples of states that take the former approach while Ohio takes the latter.

Recommendation:

Structure scoring systems to contain measures for both individual ratios and fiscal health as a whole. Pennsylvania and Ohio offer two examples of this. Pennsylvania's system measures a municipality's performance for each indicator by comparing its values against benchmark values. When a ratio value exceeds the benchmark, this calls attention to the particular issue measured by the ratio. Additionally, Pennsylvania uses the ratio results to generate a composite score, as described in detail on page 10. The composite scores are ranked and reviewed by the State of Pennsylvania, which ultimately provides support to the 100 lowest scoring municipalities. Ohio's system also measures a municipality's performance for each indicator by comparing its values against benchmark values. In Ohio, each ratio essentially has two benchmarks – a less demanding value that sends a "cautionary" signal and a more demanding value that sends a "critical" signal⁶⁵. Thus, as is the case in Pennsylvania, one can obtain issue-specific performance information from Ohio's system. This level of specificity is useful for officials at all levels of government. For fiscally stressed municipalities, this detailed information can be helpful in identifying the causes of fiscal stress. Additionally, even municipalities that are fiscally healthy overall often have points of fiscal weakness that are exposed through ratio analysis. Thus, for fiscally healthy municipalities, this detailed information can also be helpful in identifying points of fiscal stress. Ohio also uses the ratio results to measure fiscal health as a whole. However, it does so without a composite score. As is explained in detail on page 16, the State of Ohio analyzed historical data and determined that governments with fiscal distress declarations historically had six or more critical indicators and a combination of eight critical and/or cautionary indicators in the years leading up to the declaration. Thus, the State of Ohio advises that local governments with critical and/or cautionary indicator numbers equal to or approaching these thresholds should understand that they are likely at or approaching a state of fiscal distress. This guidance from the State of Ohio on interpreting the collective ratio results is particularly useful for local government officials who can directly assess their local fiscal health.

Comparing Different Government Types

States use fiscal health monitoring systems to assess a wide range of municipalities. Of the four case studies presented here, municipalities range from the Village of Lillie, Louisiana that has a population of around 100 and assets worth \$4,448 to the City of Philadelphia that has assets worth \$2.5 billion and a population of nearly 1.6 million.

Recommendation:

⁶⁵ See page 16 for a more complete explanation of Ohio's scoring system.

To the extent possible, this report recommends comparing municipalities to like municipalities, particularly according to size, function, and legal structure. It is often most difficult to find comparable municipalities for large cities, which are often few in number or even stand-alone within a given state. Colorado's system, which examines only counties and cities, distinguishes between the two methodologically. The distinction is made in setting benchmarks – some benchmarks are different for cities and counties. For example, Indicator 3 in Colorado's system examines intergovernmental revenue dependence. Because cities and counties are funded differently, the benchmark for this ratio is 25% for cities and 50% for counties. At the current value, 12 of Colorado's 64 counties exceed the benchmark (have intergovernmental revenue dependence beyond 50%). If the benchmark value for counties was 25%, the same value used for cities, then 51 of Colorado's counties would exceed the benchmark.

Timing of Analysis

Officials from all four states reported the timing of analysis as a challenge in administering their fiscal monitoring systems. Every system has at least a one-year lag between the time of its analysis and local financial activity. There are two key issues driving this lag. First, the data that feeds these systems is often sourced from annual reporting and/or audits. Thus, a lag is inevitable without alternative data sourcing systems that receive data on a more regular basis. Second, however, state officials often require audited data. This extends the lag in time.

Recommendation:

Consider incorporating methods for diminishing the lag time between fiscal analysis and local financial activity. Ohio's approach addresses both data accuracy and analysis expediency. Ohio's system generates two Fiscal Health Indicator reports for each municipality for each fiscal year. It generates a "preliminary" report from data submitted electronically to the state by local governments during the annual financial reporting process. These preliminary reports often reflect the previous 12-months activity with little lag time. Once the State of Ohio receives audited data, it then generates a second "final" report.

Methodology Revision

Recommendation:

Review the methodology taken and consider revisions to it with some frequency. The context that systems operate amidst changes over time, including legal, economic and political frameworks. Additionally, numerical values and trends will change also due to inflation, monetary policy, and an array of other factors. Thus, it is important to review the methodology of a fiscal monitoring system with some frequency to ensure that it continues to align with its context and purpose and that its technical components such as ratios and benchmark values continue measure fiscal health as intended.

Collaboration with Local Governments

State-administered fiscal monitoring systems intersect directly with the relationships between state and local governments. These systems can create and/or indicate strained relationships between local units of government and the state government.

Recommendation:

State officials should collaborate with local government officials in developing fiscal monitoring systems and should design them with the utility of local governments in mind. The State of Ohio engaged local-level officials when it developed its system. Officials from the State of Ohio reported three benefits from doing so. One, input from local officials improved the functionality of the system. State officials shared a first draft of its system design and received valuable feedback from local officials, based on their insight into local finance, which altered its methodology. Two, engaging local officials built positive relationships with the State. Three, because of the collaboration with local officials, the reports that are generated from Ohio's Fiscal Health Indicator system are understandable and thus useful not only to State officials, but also to local governments and the public.

VI. CONCLUSION

The report seeks to add depth to the literature around fiscal early warning systems. It does so by first presenting detailed explanations of four existing state systems in Section IV and then analyzing the tradeoffs and implications of the four different ratio indicator approaches in Section V. Recommendations for officials to consider as they develop and administer local fiscal early warning systems are also included in Section V. These recommendations encourage officials to consider incorporating indicators for each solvency type, to choose whether they want to err on the side of over- or under-estimating fiscal distress when setting the volume of indicators to include and the indicator benchmark values, to consider incorporating both level and change ratios to measure both the status and trajectory of fiscal health, to set benchmarks that are meaningful and align with the purpose of the fiscal monitoring system, to structure scoring systems to contain measures for both individual ratios and fiscal health as a whole, to compare municipalities to like municipalities to the extent possible, to consider incorporating methods for diminishing the lag time between fiscal analysis and local financial activity, to review the methodology taken and consider revisions to it with some frequency, and to collaborate with local government officials in developing fiscal monitoring systems. Ultimately, this report acknowledges that each state operates amidst an individual context with an individual purpose. This report asserts that there is no one optimal system, only the right system based on the perceived needs of policymakers in that particular location.

VII. APPENDICES

Appendix I⁶⁶

Table 1: The Survey of Financial Condition Questions

Question 1: Has your municipality maintained a deficit over a 3-year period, with a deficit of 1% or more in each of the previous fiscal years?

Question 2: Have your municipality's expenditures exceeded revenues for a period of 3 years or more?

Question 3: Has your municipality defaulted in payment of principal or interest on any of its bonds or notes or in payment of rentals due any authority?

Question 4: Has your municipality missed a payroll for 30 days?

Question 5: Has your municipality failed to make required payments to judgment creditors for 30 days beyond the date of the recording of the judgment?

Question 6: Has your municipality, for a period of at least 30 days beyond the due date, failed to forward taxes withheld on the income of employees or failed to transfer employer or employee contributions to social security?

Question 7: Has your municipality accumulated and operated for each of 2 successive years a deficit equal to 5 percent or more of its revenue?

Question 8: Has your municipality failed to make the budgeted payment of its minimum obligation as required by Section 302 of the Act of December 18, 1984, known as the Municipal Pension Fund Act, during the fiscal year for which the payment was budgeted and failed to take action within that time period to make required payments?

Question 9: Has your municipality sought to negotiate resolution or adjustment of a claim in excess of 30 percent against a fund or budget and failed to reach an agreement with creditors?

Question 10: Has your municipality filed a municipal debt readjustment plan pursuant to Chapter 9 of the Bankruptcy Code?

Question 11a: Was your municipality at the maximum general purpose real estate tax limit as of the last municipal fiscal year?

Question 11b: If yes, have you reduced police, highway or other services this fiscal year because of your inability to raise general purpose real estate taxes?

⁶⁶ Patricia A. Patrick and John M. Trussel, "An Analysis of Survey of Financial Condition Data," *The Center for Rural Pennsylvania*, May 2013.

Appendix II – Ohio Fiscal Distress Designation Definitions⁶⁷

Fiscal Caution

Declaring Fiscal Caution in a Local Government

Any one factor is needed for the Auditor of State to declare fiscal caution:

- When the Auditor of State declares that a municipal corporation, county, or township financial records are unauditable, and has issued a letter to the municipal corporation, county, or township indicating the timeframe under which those records must be restored to an auditable condition, and the municipal corporation, county, or township has failed to do so within the timeframe specified in the letter.
- When the Auditor of State identifies significant deficiencies or material weaknesses over accounting and financial reporting functions, direct and material noncompliance with applicable laws and regulations, or management letter comments which, in the opinion of the Auditor of State, the aggregate effect of such reported issues has a significant effect on the financial condition of the municipal corporation, county, or township.
- When a deficit fund balance exists at year-end in the General Fund that is greater than two percent of that fund's revenue for that year, and/or when a deficit fund balance exists at year-end in any other fund that is greater than two percent of that fund's revenue for that year, and there are not sufficient resources in the General Fund that may be transferred to eliminate the deficit or in any other fund that may lawfully transfer resources to eliminate the deficit.
- When a low year-end carryover balance exists in the General Fund such that the balance is equal to or less than an amount representing one month of expenditures (based on one-twelfth of prior year expenditures), and/or when a low year-end carryover balance exists in any other fund such that the balance is equal to or less than an amount representing one month of expenditures (based on one-twelfth of prior year expenditures), and there are not sufficient resources in the General Fund that may be transferred or in any other fund that may lawfully transfer resources to subsidize the fund.
- When a municipal corporation, county, or township has not reconciled its accounting journals and ledgers with the treasury/bank for more than three months and is unable to reconcile the records within one month of written notification by the Auditor of State.

⁶⁷ Ohio Auditor of State, "Local Governments in Fiscal Distress"
<http://ohioauditor.gov/fiscal/local.html#emergency> accessed November 20, 2019.

Fiscal Caution Process and Termination

Once the Auditor of State has determined that the entity shall be placed in fiscal caution, the governing body will receive written notice of the declaration. This notification shall also request a written proposal from the entity for discontinuing or correcting the fiscal practice or budgetary conditions that prompted the declaration. The entity will be given 60 days to provide a written proposal to the Auditor of State.

The Auditor of State may visit and inspect the entity while under fiscal caution and may provide technical assistance to the entity in implementing proposals to eliminate the conditions that prompted the fiscal caution declaration. Costs for this support would be borne by the State.

If the entity has not made reasonable proposals or otherwise taken action to discontinue or correct the practices or conditions that led to the declaration of fiscal caution as set forth in the proposed plan, the Auditor of State may determine that the entity should be in a state of fiscal watch or fiscal emergency.

An entity cannot be released from fiscal caution until the Auditor of State has determined that the corrective actions have been or are being implemented and that the fiscal caution conditions no longer exist.

Fiscal Watch

Declaring Fiscal Watch in a Local Government

Any one factor is needed for the Auditor of State to declare fiscal watch:

- The existence of either of the following:
 - All accounts that were due and payable from the General Fund for more than 30 days, less the year-end balance of the General Fund, exceeded one-twelfth of the General Fund budget for the year.
 - All accounts that were due and payable from all funds for more than 30 days, less the year-end balance in these funds, exceeds one-twelfth of the available revenue for the preceding fiscal year from these funds.
- Total deficit funds, less the total of any balances in the General Fund and in any special fund that may be transferred to meet such deficits, exceeds one-twelfth of the total General Fund budget for that year and the receipts to those deficit funds during that year (other than transfers from the General Fund).
- Money and marketable investments, less outstanding checks, less total positive fund balances of general fund and special funds, exceeds one-twelfth of the total amount received during the preceding fiscal year.
- Based on an examination of a financial forecast approved by the legislative authority, the Auditor of State certifies that the General fund deficit at the end of the current fiscal year will exceed one-twelfth of the General fund revenue from the preceding fiscal year.

Fiscal Watch Process and Termination

To determine if an entity qualifies for fiscal watch or emergency, the Auditor of State would conduct an initial review of entity finances. This analysis would commence upon the written request of the entity or at the initiation of the Auditor of State. If an entity is under "fiscal watch" the Auditor of State may provide technical and support services to the entity. Costs for this support would be borne by the State.

Once the Auditor of State has issued a written declaration of the existence of fiscal watch to the governing body of the entity, the entity has 120 days to submit a financial recovery plan to the Auditor of State that identifies actions to be taken to eliminate all of the fiscal watch conditions. The plan is subject to review and approval by the Auditor of State. If a feasible financial recovery plan is not submitted within the time period prescribed, the Auditor of State shall declare that a fiscal emergency condition exists.

The fiscal watch shall be in effect until the Auditor of State determines that none of the fiscal watch conditions are any longer present and cancels the watch.

Fiscal Emergency

Declaring Fiscal Emergency in a Local Government

Any one factor is needed for the Auditor of State to declare a fiscal emergency:

- The same first three conditions as fiscal watch, with the exception that the fraction is changed to one-sixth, with the added requirement that the condition must continue to exist at least four months after the end of the fiscal year.
- Failure, for lack of funds, to make all payroll to employees that continues beyond 30 days, or a period of agreed-upon extension that can not last more than 90 days from the original time for payment.
- Default of payment on any debt obligation for more than 30 days.
- An increase in the inside millage by the County Budget Commission that results in a reduction for any of the overlapping subdivisions or taxing districts.

Fiscal Emergency Process

Entities declared in fiscal emergency come under the oversight of a financial planning and supervision commission. The Auditor of State serves as the "financial supervisor" to the commission.

Members of the Financial Planning and Supervision Commission

- Treasurer of State (or office designee)
- Director of state office of Budget and Management (or office designee)
- For municipalities, the mayor and presiding officer of municipal legislative authority

- For counties, the president of the board of county commissioners and the county auditor
- For townships, a member of the board of township trustees and the county auditor
- Three appointed members chosen out of five names provided to the Governor by the mayor and presiding officer of municipal legislative authority; or by the county board of commissioners or board of township trustees. These individuals must be residents of the declared government (by home or office address) with at least five years private-sector business/financial experience.

Note: For a Village or Township with a population of less than one thousand (1,000) as of the most recent census, the Auditor of State serves as the Financial Supervisor and has all the powers and responsibilities of a commission. (effective September 29, 2011)

Responsibilities of the Commission

- Approve a financial recovery plan containing actions to essentially eliminate fiscal emergency conditions, balance the budget, avoid future deficits and market long-term obligations. The plan must be submitted to the commission by the mayor, board of commissioners or board of trustees within 120 days of its first meeting. The commission can either accept or reject the plan, listing reasons if rejected. The above officials then have 30 days to resubmit a plan, and the process is repeated until a plan is accepted.
- The commission, has widespread authority to review all revenue and expenditure estimates to determine whether they result in a balanced budget; require the government by ordinance or resolution to establish monthly levels of expenditures and encumbrances consistent with the financial plan; to approve and monitor these levels; to approve the amount and purpose of any debt issues; to make and enter into all contracts and agreements necessary to the performance of its duties and to make recommendations for cost reductions or revenue increases to carry out the financial plan.

Fiscal Emergency Termination

Fiscal emergency is terminated when the following conditions are met:

- An effective financial accounting and reporting system is being implemented, with expected completion within two years.
- All fiscal emergency conditions have been or are in the process of being eliminated, and no new emergency conditions have occurred.
- The financial recovery plan objectives are being met.
- The entity has a five-year financial forecast that the Auditor of State determines is "nonadverse".

Appendix III⁶⁸

⁶⁸ "FHI Report Descriptions" *Ohio State Legislature*,
<https://www.ohioauditor.gov/FHI/fhi%20report%20descriptions.pdf>, accessed February 20, 2019.

FINANCIAL HEALTH INDICATORS

Defining the indicators

According to Ohio law, the Auditor of State must “develop guidelines for identifying fiscal practices and budgetary conditions, amongst municipal corporations, counties, and townships that, if uncorrected, could result in a future declaration of fiscal watch or emergency.”



Pursuant to Ohio Revised Code Section 118.025, the Auditor of State may declare an entity in fiscal caution for engaging in certain fiscal practices or budgetary conditions. In addition to these fiscal caution guidelines, the Auditor of State has developed Financial Health Indicators (FHI). FHI are a collection of financial information, percentages and ratios gathered from annual financial statements filed by the local governments and their audit reports, which are useful in predicting financial stability.

The Auditor of State will use these FHI to recognize early signs of fiscal stress at specific local governments and, where requested, take a proactive approach to monitoring or assisting these local governments.

Seventeen FHI have been identified as useful in determining signs of fiscal stress. The FHI are based on information derived from the annual financial statement data submitted to the Auditor of State by local governments and their audit reports.

From the financial statement data, our staff gathers information as it relates to:

Governmental Type Activities (GTA)

The financial information for Governmental Type Activities is from the government-wide financial statements — Statement of Net Assets/Position and Statement of Activities.

General Fund and All Governmental Funds

General Fund and All Governmental Fund information is from the govern-

mental fund type financial statements — Balance Sheet and Statement of Revenues, Expenditures and Changes in Fund Balances.

From the audit reports, the Auditor's staff gathers information as to whether the entity is complying with Ohio budgetary law and/or proper accounting methods.

The Auditor of State has evaluated the 17 FHI as useful in identifying fiscal stress in local governments that report financial statements prepared in conformity with Generally Accepted Accounting Principles (GAAP). For local governments that choose to present their financial statements on cash or modified cash basis of accounting, it has been determined that at least 15 of the FHI are useful in identifying fiscal stress.

Using historical data, the Auditor of State has determined that entities reporting on a **GAAP basis** have higher financial stress if they have at least six FHI with a “critical outlook” or if they have a combination of eight negative indicators, either “critical” and “cautionary. The higher the number of “critical” indicators, the higher the level of stress.

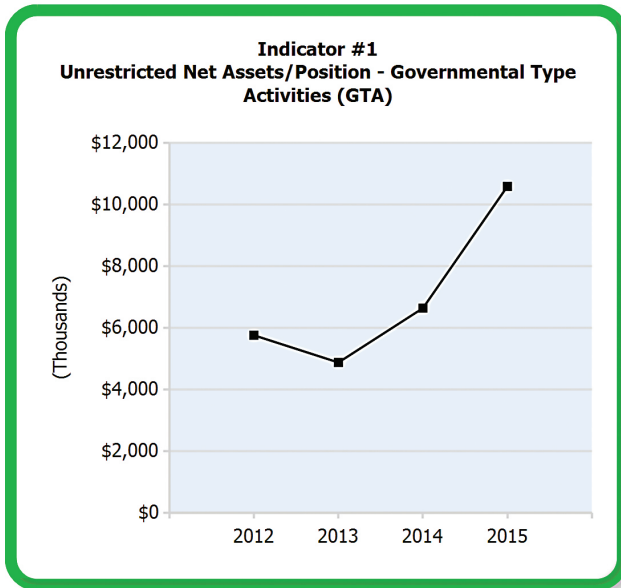
Using the same data, the Auditor of State determined entities reporting on a **cash or modified cash basis** of accounting are at an elevated risk of financial stress if they have at least four “critical” indicators or a combination of at least six “critical” and “cautionary” indicators. The stress is higher as the number of “critical” indicators increases.

FINANCIAL HEALTH INDICATORS

Description of indicators

The 17 FHI, including the description, meaning, and importance of each indicator, are:

Indicator #1 - Positive Outlook



1 Unrestricted Net Assets/Position of Governmental Type Activities (GTA)

- There are three (3) major components to net assets/position (equity) - Net investment in capital assets, restricted net assets/position, and unrestricted net assets/position.
- Unrestricted net assets/position represents the portion of net position that has no related liabilities or restriction as to use.
- Negative unrestricted net assets/position occurs primarily if liabilities exceed assets.

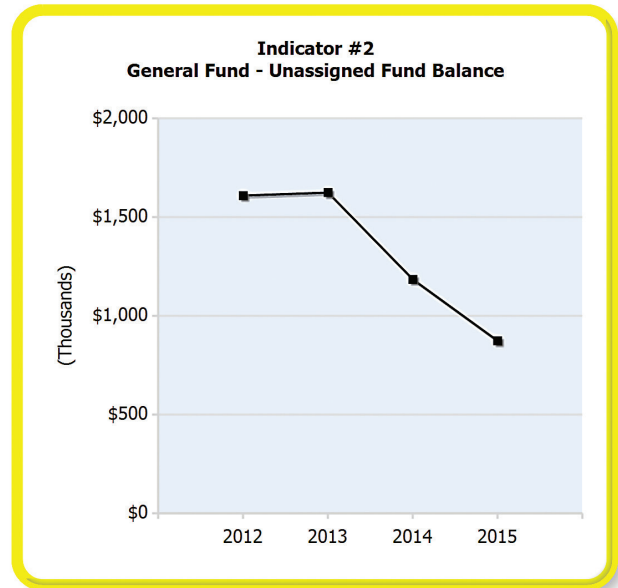
What it means: This indicator identifies when an entity has declining or negative unrestricted net assets/position.

Why it is important: This indicator identifies if net assets/position is available for unrestricted purposes. Although unrestricted net assets/position may not be in liquid form, it is important to have net assets/position available and unrestricted as to use. If an entity's unrestricted net assets/position is declining or is negative, it leaves little or no room for unexpected expenses; and therefore, is a sign of fiscal stress.

Critical Outlook – Zero or negative amounts

Cautionary Outlook – Decline between the current and prior year by more than 1%.

Indicator #2 - Cautionary Outlook



2 Unassigned Fund Balance of the General Fund

- A component of equity
- There are five components of fund equity – nonspendable, restricted, committed, assigned, and unassigned. Unassigned fund balance is the portion of fund balance that has no related liabilities or has not otherwise been obligated.

What it means: This indicator identifies when an entity has declining or negative unassigned fund balance.

Why it is important: This indicator identifies if fund balance is available for unrestricted purposes. Although unassigned fund balance may not be in liquid form, it is important to have fund balance available without restrictions as to use. If an entity's unassigned fund balance is declining or is negative, it leaves little or no room for unexpected expenses; and therefore, is a sign of fiscal stress.

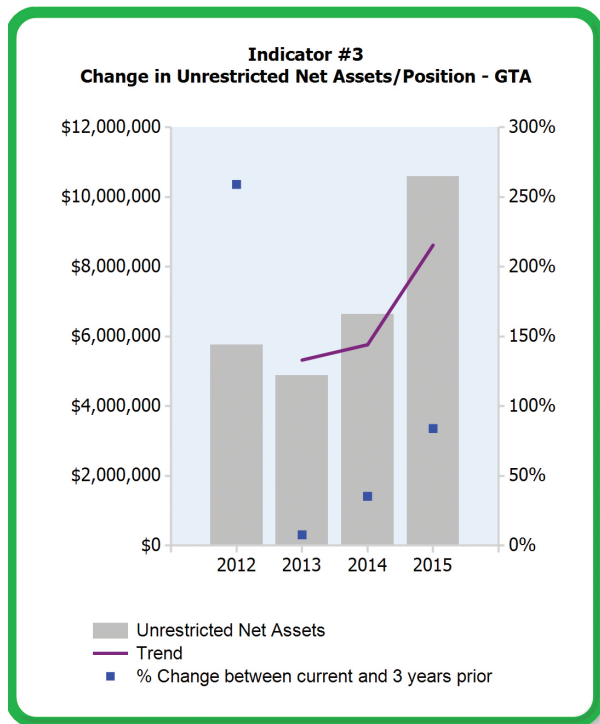
Critical Outlook – Zero or negative amounts

Cautionary Outlook – Decline between the current and prior year by more than 1%.

FINANCIAL HEALTH INDICATORS

Description of indicators

Indicator #3 - Positive Outlook



3 Change in Unrestricted Net Assets/Position for GTA

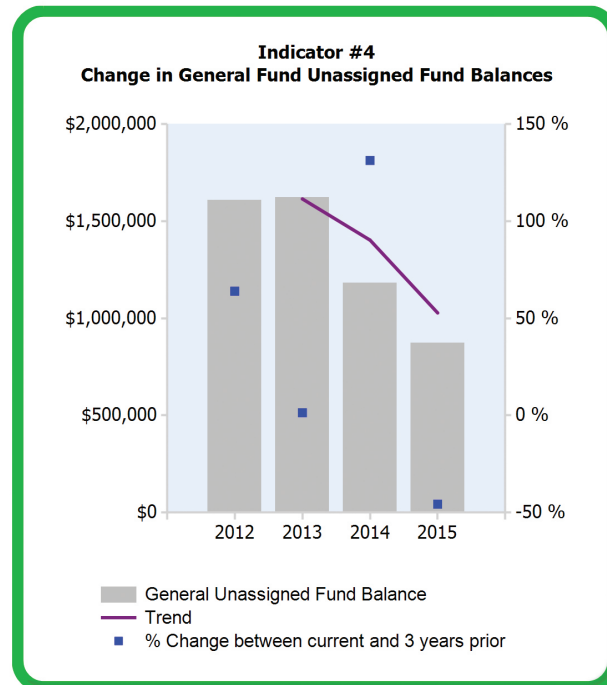
What it means: This indicator identifies changes (increases or decreases) in unrestricted net assets/position from the prior year to the current year and will be useful in identifying local governments whose unrestricted net assets/position is deteriorating.

Why it is important: A declining unrestricted net assets/position can be a sign of fiscal stress. This indicator is important in identifying a trend of deteriorating unrestricted net assets/position as well as how rapidly it is deteriorating.

Critical Outlook – The current period and at least two of the previous three periods reflecting a zero or negative amount OR a rapidly declining trend defined as a decline in each of the last three periods with a drop of greater than 20%.

Cautionary Outlook – Declining trend defined as a decline in each of the last three periods with a drop of 10% to 20%.

Indicator #4 - Positive Outlook



4 Change in General Fund Unassigned Fund Balance

What it means: This indicator identifies changes (increases or decreases) in unassigned fund balance from the prior year to the current year and is useful in identifying local governments whose unassigned fund balance is deteriorating.

Why it is important: A declining unassigned fund balance can be a sign of fiscal stress. This indicator is important in identifying a trend of a deteriorating unassigned fund balance as well as how rapidly it is deteriorating.

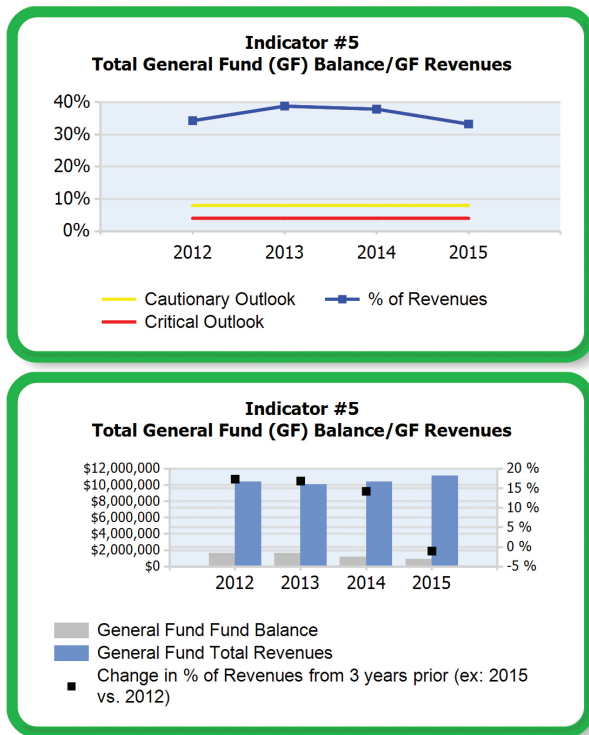
Critical Outlook – The current period and at least two of the previous three periods reflecting a zero or negative amount OR a rapidly declining trend defined as a decline in each of the last three periods with a drop of greater than 20%.

Cautionary Outlook – Declining trend defined as a decline in each of the last three periods with a drop of 10% to 20%.

FINANCIAL HEALTH INDICATORS

Description of indicators

Indicator #5 - Positive Outlook



5 Total General Fund (GF) Balance / GF Revenues

What it means: This indicator identifies reserves available in the General Fund. The larger the reserve the better the entity is able to absorb, in the short term, the impact of sudden revenue loss or significant increases in operating costs, and begin planning financial adjustments.

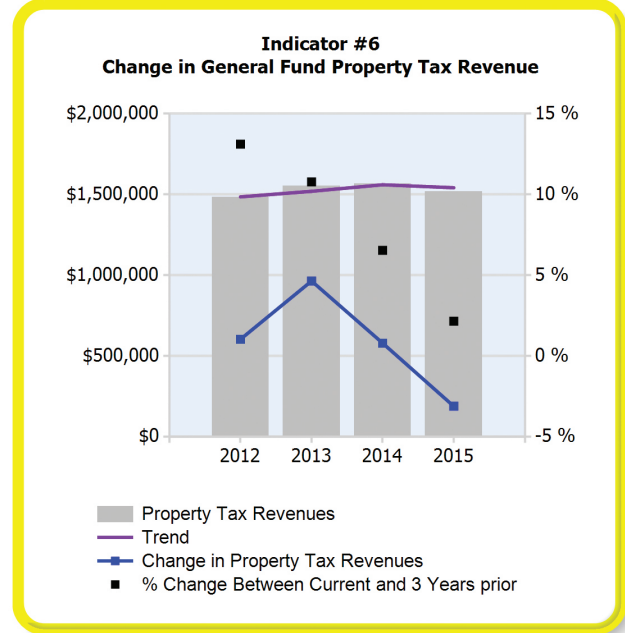
This indicator is calculated by taking the total General Fund balance divided by total General Fund revenues. This will determine the percentage of total General Fund revenues (or the current year budget) that has been reserved or available for carry over to the following year.

Why it is important: This indicator identifies a low reserve of fund balance even if Indicators 1 through 4 do not indicate negative unrestricted net assets/position or unassigned fund balance.

Critical Outlook – Negative percentage, very low percentage ($< 1/24$ or 4%), OR if fund balance is less than a two month carryover (17%), a rapidly declining trend defined as a drop of 10% or greater over a three year period.

Cautionary Outlook – Low percentage ($< 1/12$ th or 8%) OR if fund balance is less than a two month carry-over (17%), a declining trend defined as a drop of 5%-10% over a three year period, OR if the fund balance represents less than 6 months (50%) of current year revenues, a decline in each of the last three periods.

Indicator #6 - Cautionary Outlook



6 Decline in General Fund Property Tax Revenue

What it means: This indicator reflects the percentage change from year to year for property tax revenue.

Why it is important: This indicator reflects declines in property tax revenue and is an indication that an entity may be facing financial hardship due to declines in significant revenue sources. It will also reflect the need for additional sources of revenue to maintain stability.

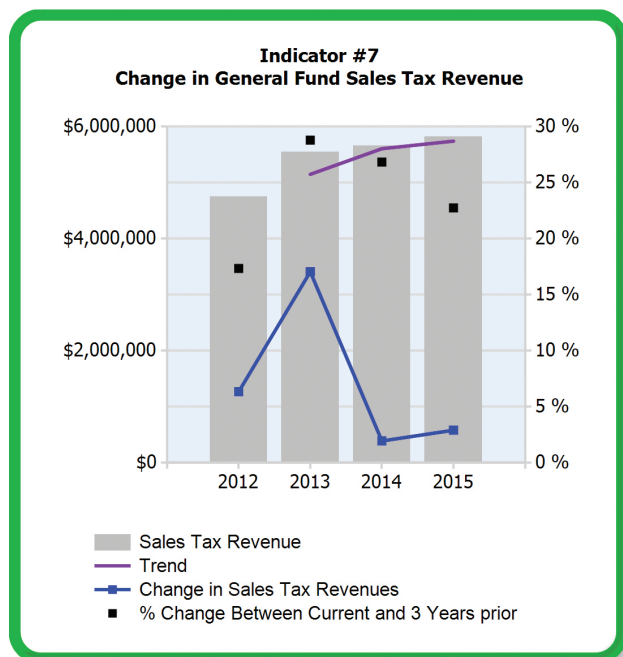
Critical Outlook – If property tax revenues represent 7-20% of total General Fund revenues, a trend of declining tax revenue over the last three years in excess of 20% OR if property tax revenues represent greater than 20% of total revenues, a trend of declining tax revenue over the last 3 years in excess of 10%.

Cautionary Outlook – Decrease in tax revenue from the current to the prior year by more than 1%.

FINANCIAL HEALTH INDICATORS

Description of indicators

Indicator #7 - Positive Outlook



7 Decline in General Fund Tax Revenue (Income Tax/Cities, Sales Tax/Counties)

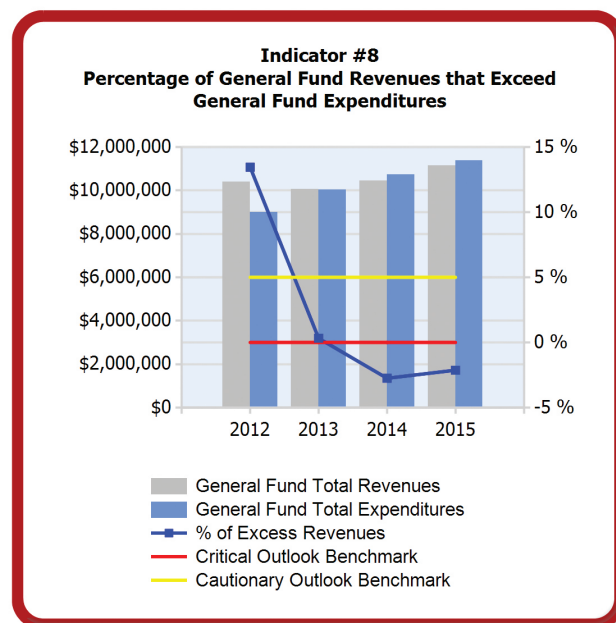
What it means: This indicator reflects the percentage change from year to year for sales tax revenue for counties and income tax revenue for cities.

Why it is important: This indicator reflects declines in these revenue types and is an indication that an entity may be facing financial hardship due to declines in significant revenue sources. It will also reflect the need for additional sources of revenue to maintain stability.

Critical Outlook – If income tax or sales tax revenues represent 7-20% of total General Fund revenues, a trend of declining tax revenue over a three year period in excess of 20% OR if income tax or sales tax revenues represent greater than 20% of total general fund revenues, a trend of declining tax revenue over the last 3 years in excess of 10%.

Cautionary Outlook – Decrease in tax revenue from the current to the prior year by more than 1%.

Indicator #8 - Critical Outlook



8 Percentage of General Fund Revenues that Exceed General Fund Expenditures

What it means: This indicator is calculated as total General Fund revenues less total General Fund expenditures, divided by total General Fund revenues. It will provide an indication of operating deficits and the size of the operating deficit compared to the current year budget. An operating deficit is the difference between revenues and expenditures. If expenditures exceed revenues, an operating deficit exists.

Why it is important: This indicator is important because it reflects if an operating deficit exists but also emphasizes the size of the deficit as compared to the current year's budget. This is an indication of the shortage in the current budget. A trend of operating deficits indicates potential financial hardship.

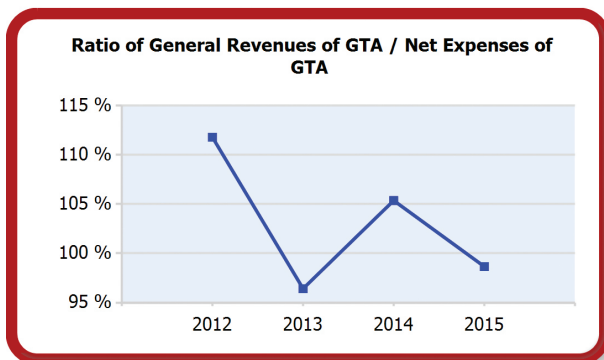
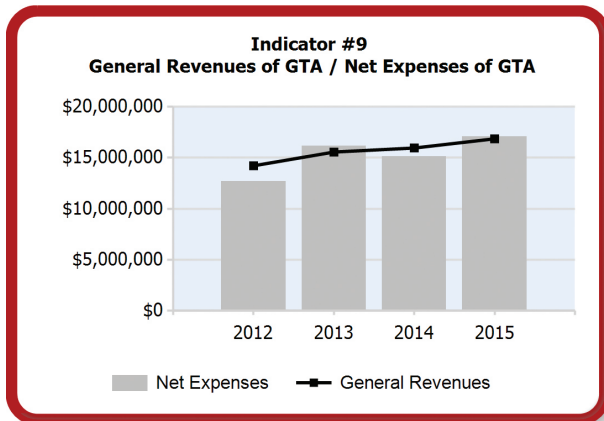
Critical Outlook – Negative percentage

Cautionary Outlook – Low percentage (<1/20th or 5%)

FINANCIAL HEALTH INDICATORS

Description of indicators

Indicator #9 - Critical Outlook



9 General Revenues of GTA / Net Expenses of GTA

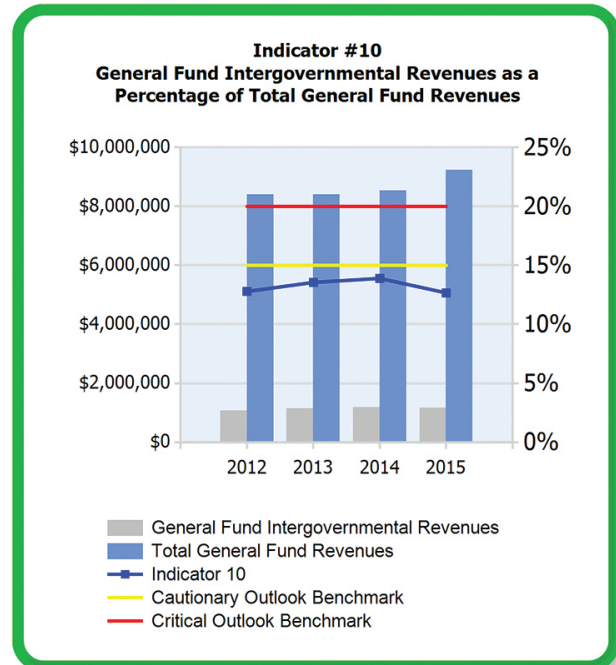
What it means: The ratio of this indicator reflects coverage of net expenses by general revenues. This indicator determines if, on a government-wide basis, expenses are exceeding revenues. For example, local taxes, unrestricted revenues (e.g. investment earnings) and unrestricted grants should be sufficient to meet expenses not covered by program revenues. Net expense is total expense less program revenues. Program revenues include charges for services (e.g. fees and fines), operating grants and capital grants.

Why it is important: This indicator is important to be aware if a shortage in revenues to cover expenses exists. A declining trend would indicate fiscal stress.

Critical Outlook – Ratio less than 100%

Cautionary Outlook – Declining trend of at least three years

Indicator #10 - Positive Outlook



10 General Fund Intergovernmental Revenues as a Percentage of Total General Fund Revenues

What it means: This indicator will reflect an over-reliance on intergovernmental revenues which are subject to state and federal budget cuts. A high percentage suggests the entity is heavily reliant on external governmental organizations for grants, entitlements, or shared revenues; and therefore, vulnerable to decreases in these revenue sources.

Why it is important: It is important to be aware of the percentage of total revenues that are not considered “own-source,” or local sources, of revenue. Understanding the percentage of total revenues derived from intergovernmental sources is important when trying to maintain fiscal stability, while dealing with an economic downturn.

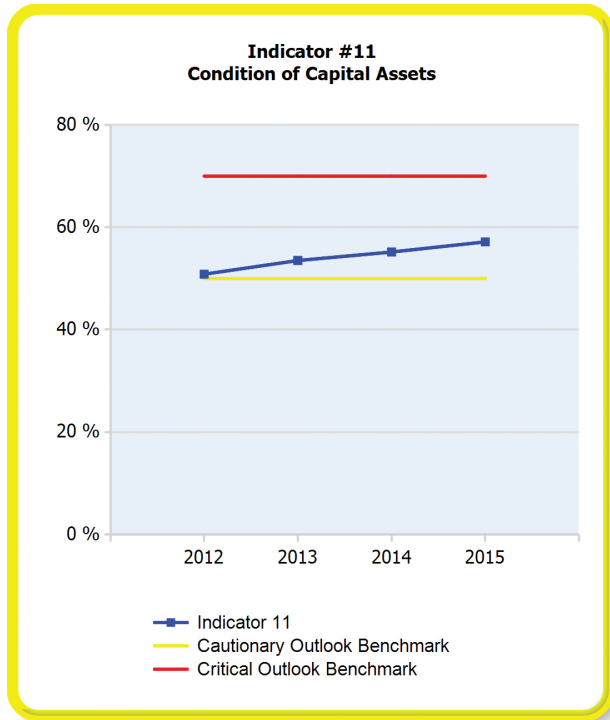
Critical Outlook – Ratio greater than 20%

Cautionary Outlook – Ratio between 15% - 20%

FINANCIAL HEALTH INDICATORS

Description of indicators

Indicator #11 - Cautionary Outlook



11 Condition of Capital Assets*

What it means: This indicator is accumulated depreciation as a percentage of depreciable capital assets. This indicator will identify situations in which repair or replacement of the local government's assets will be necessary. A high percentage indicates assets replacement is imminent and the entity may be delaying replacement of assets or significant repairs for cash flow purposes.

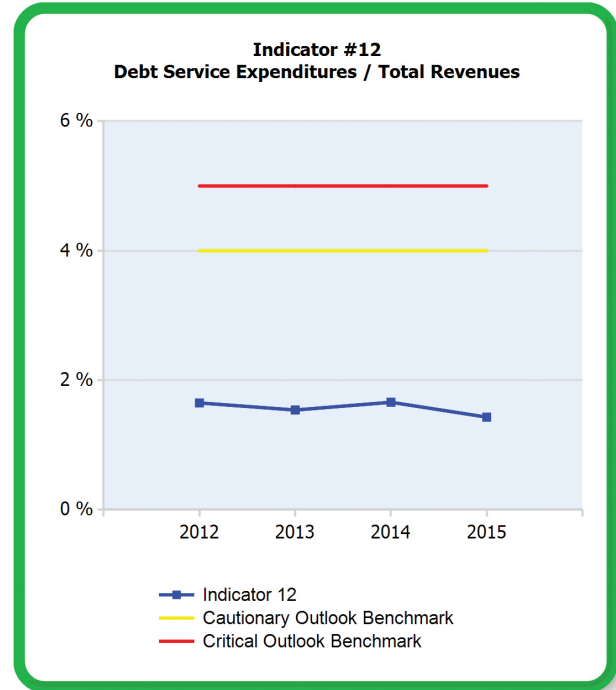
Why it is important: When entities delay improving or replacing assets in order to maintain cash flows for other purposes, improvements and replacements become absolutely necessary and may contribute to financial hardship on an already strained budget.

Critical Outlook – Ratio greater than 70%

Cautionary Outlook – Ratio between 50% - 70%

*This FHI is only applicable to local governments reporting on a GAAP basis of accounting

Indicator #12 - Positive Outlook



12 Debt Service Expenditures / Total Revenues

What it means: This indicator is total debt service expenditures divided by total revenues (for all governmental funds). This indicator identifies the percentage of the budget used/needed for repayment of debt.

Why it is important: Higher debt service expenditures to total revenues is unfavorable since the entity spends more of its current budget on debt repayment. An increasing trend of debt service expenditures to total revenues may mean the percentage of budget dedicated to debt payments is increasing; and therefore, less revenue will be available for asset repair/replacement or meeting current service demands.

For Cities:

Critical Outlook – Ratio greater than 15%

Cautionary Outlook – Ratio between 12% - 15%

For Counties:

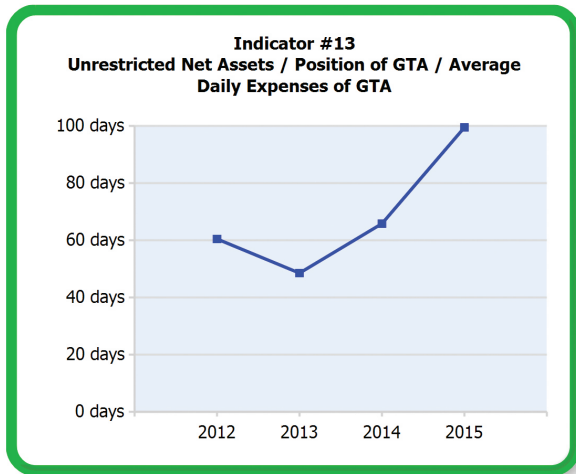
Critical Outlook – Ratio greater than 5%

Cautionary Outlook – Ratio between 4% - 5%

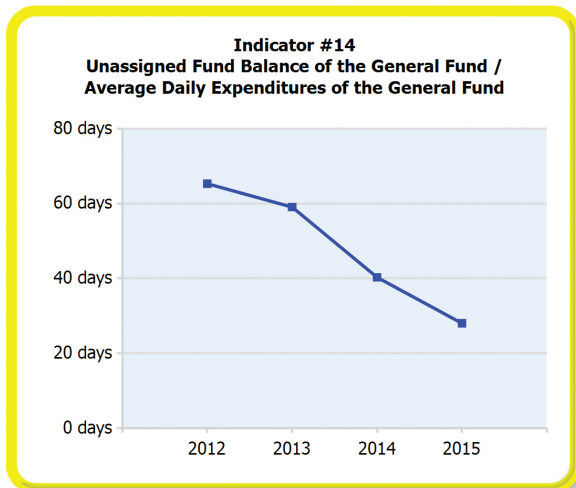
FINANCIAL HEALTH INDICATORS

Description of indicators

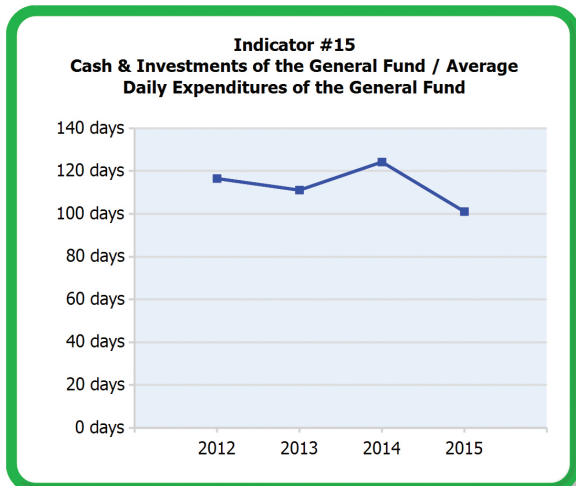
Indicator #13 - Positive Outlook



Indicator #14 - Cautionary Outlook



Indicator #15 - Positive Outlook



13

13-15. Average Daily Expenses or Expenditures Ratio (Indicators 13, 14 & 15):

13. Unrestricted Net Assets/Position of GTA/Average Daily Expenses of GTA

14

14. Unassigned Fund Balance of the General Fund/Average Daily Expenditures of the General Fund

15

15. Cash & Investments of the General Fund/Average Daily Expenditures of the General Fund

What they mean: Indicators 13, 14 and 15 identify the number of days the local government's unrestricted net assets/position, unassigned fund balance, and cash and investments will sustain the entity. The indicators are based on the daily average expenses/expenditures.

Why it is important: These indicators are important because they identify the number days the entity may operate using their unrestricted net assets/position, unassigned fund balance, and cash and investments. The fewer days the entity can operate, the more financial stress they are under. It provides an early indication of an entity's need to adjust their financial/expenditure planning.

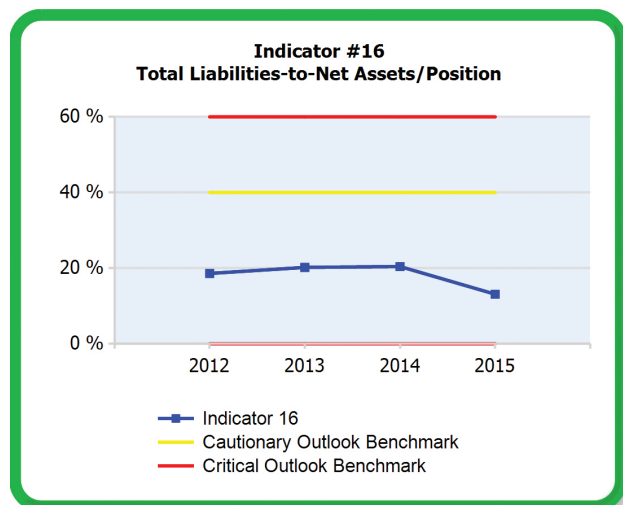
Critical Outlook – Zero days or below

Cautionary Outlook – Less than 30 days

FINANCIAL HEALTH INDICATORS

Description of indicators

Indicator #16 - Positive Outlook



16 Total Liabilities-to-Net Assets/Position*

What it means: This indicator is the ratio of total liabilities of GTA divided by total net assets/position of GTA and indicates the percentage of every dollar of resources, available for providing public services, that is owed by the entity.

Why it is important: This indicator identifies entities that are over-extended in terms of the percentage of every dollar which is owed to others.

For Cities:

Critical Outlook – Negative ratio (representing negative net assets) OR ratio greater than 70%

Cautionary Outlook – Ratio between 50% - 70%

For Counties:

Critical Outlook – Negative ratio (representing negative net assets) OR ratio greater than 60%

Cautionary Outlook – Ratio between 40% - 60%

* This FHI is only applicable to local governments reporting on a GAAP basis of accounting

Indicator #17 - Positive Outlook

Indicator #17 Budgetary Non-Compliance and/or Unreconciled/Unauditable Financial Records?	
Audited Year End	Applicable
2015	No
2014	No
2013	No
2012	No

17 Budgetary Non-Compliance and/or Unreconciled/Unauditable Financial Records

What it means: This indicator identifies if an entity's recent audit reports include budgetary non-compliance and/or unreconciled/unauditable financial records. The Indicator 17 determination is based on the current and prior two (2) audited years.

Why it is important: This indicator will reflect if an entity is not complying with Ohio budgetary law and/or proper accounting methods. Maintaining accurate, reconciled accounting records and adherence to Ohio budgetary law is a significant factor in maintaining fiscal stability.

Critical Outlook – Direct and material audit finding(s) described above for the current and prior two audit years.

Cautionary Outlook – Direct and material audit finding(s) described above for the current audited year.

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