GASB GOVERNMENTAL ACCOUNTING STANDARDS BOARD

MEMORANDUM

Issue 3, Paper 1
October 11, 2021 Board Meeting

To: Board Members and Alan Skelton
From: Jialan Su, Scott Anderson, Janeen Hathcock, Cameron Rosenecker, and Elizabeth Frazier
c: GASB Technical Staff and Meeting Observers
Date: September 28, 2021
Re: Research Memorandum: Going Concern Disclosures
Att: Attachment A: Supporting Materials

KEY FINDINGS

- Going concern opinions (GCOs) rarely are given to state and local governments—fewer than 300 over an 18-year period.
  - The most common reasons given for GCOs were deficiency of funds and losses or revenue declines.
  - The vast majority of governments receiving a GCO present going concern disclosures in the year of the GCO. A substantial majority of those governments mentioned the factors leading to the GCO in the prior-year notes to financial statements.
  - A majority of governments receiving a GCO mentioned it in MD&A in the year of the GCO. However, a much smaller percentage mentioned the factors leading to the GCO in the prior-year MD&A.
- One reason that GCOs are rare is that governments rarely cease operations, particularly general purpose governments—approximately 130 between 2002 and 2012.
  - 70 percent of those governments dissolved completely, rather than being absorbed into or merging with another government. Smaller governments were more likely to dissolve completely.
  - The most common primary reasons for dissolution were seeking greater efficiency and low citizen participation. Financial distress was the primary reason for dissolution in 10 percent of the governments, though it is a relevant factor in other reasons such as seeking greater efficiency, population decline, natural disasters, and fraud/mismanagement.
- Even though researchers, users, and state oversight bodies do not agree on a single indicator or set of indicators that is consistent in identifying or predicting the financial condition for all governments, the terminology they use often combines the words financial or fiscal with words such as stress, distress, health,

or condition to convey a broad conceptual agreement on what constitutes financial stress for a government.

- Two common themes emerged in the academic literature exploring the definition and causes of financial stress: (1) financial stress is a factor of both financial issues and managerial or administrative issues; (2) the effects of economic cycles may need to be distinguished from the internal effects of a persistent and structural mismatch between resource availability and resource needs.
- Researchers had success in identifying or predicting severe financial stress for some governments in their studies, but many also acknowledged various limitations of financial indicators and the models they developed.
- Representatives from state monitoring programs identify governments experiencing financial stress using a combination of indicators similar to the going concern indicators in the current literature, as well as other criteria their programs developed. Some representatives view their monitoring program as effective in identifying financial stress, but others have mixed views.
- The case study analyses conducted by the GASB staff identified certain categories of ratios as better indicators of severe financial stress than others, but the overall analyses did not produce convincing evidence for any individual or group of ratios to be considered universally strong indicators of severe financial stress for all the governments analyzed.
- Respondents to the user survey provided some insights on their views of current GCO information and the type of indicators that they view as useful in identifying severe financial stress:
    - A majority of user survey respondents who have analyzed a financial report with a GCO consider the information in the related note disclosure to be valuable to their analyses, decisions, or assessments of accountability.
    - Among the criteria and indicators identified in the survey, liquidity, financial position, solvency, and liability burden were the most important factors in respondents' assessment of whether a government is in severe financial stress. Some respondents also provided factors not identified in the survey but were used in their own assessment of severe financial stress, including pension or OPEB related, financial management related, and budget related.
    - A majority of the respondents expressed interest in different aspects of information related to severe financial stress, including the causes, financial indicators, environmental factors, and management's remediation plans. However, their opinions varied with regard to the relative importance of each aspect of that information.

INTRODUCTION AND BACKGROUND

The purpose of this paper is to present the results of the staff's research on going concern disclosures by state and local governments. GASB Statement No. 56,

Codification of Accounting and Financial Reporting Guidance Contained in the AICPA Statements on Auditing Standards, incorporated into the GASB's authoritative accounting and financial reporting standards certain guidance—including for going concern considerations—then presented in the auditing standards of the American Institute of Certified Public Accountants (AICPA). The going concern considerations guidance was found in Auditing Standards (AU) Section 341, *The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern*. As with the other AICPA guidance incorporated by Statement 56, the going concern considerations guidance (which was issued in 1988), was incorporated into the GASB's literature basically *as is,* except for a change to the time horizon over which a government should evaluate its ability to continue as a going concern.

Subsequent to the issuance of Statement 56, the Board discussed with the AICPA's State and Local Government Expert Panel inconsistencies found in practice in the application of going concern disclosure guidance. In addition, the Board discussed with the AICPA's Audit Issues Task Force (AITF) whether there is a gap between what financial statement users discern from going concern disclosures (for example, a conclusion that the government will cease to exist as a going concern) and the actual information needed by those users (that is, for the disclosures to identify severe financial stress).[1] Members of the AITF requested that the GASB address how to close that gap.

In April 2015, the Board approved a pre-agenda research activity on Going Concern Disclosures—Reexamination of Statement 56, with the objective to evaluate whether the existing GASB authoritative literature has provided preparers of financial statements with sufficient guidance about management's responsibilities for evaluating and disclosing uncertainties associated with severe financial stress. The research was intended to provide the Board with the information it requires to consider the need for revisions to existing standards, with the intention of reducing diversity in disclosure and more effectively meeting financial statement user needs. The GASB chair appointed a consultative group composed of various types of financial statements auditors, preparers, and users who are knowledgeable about the research topic, for the purpose of advising the staff during the conduct of the research.

[1] Although understood by many in broad terms, the term *severe financial stress* is not defined in GASB literature. Several financial stress, along with similar terms such as fiscal stress, financial distress, and so on, are used in discussing financial difficulties in general. Throughout this paper, except for quotations of or references to materials that use a different term, *severe financial stress* is used to describe financial difficulties so significant that they raise questions about a government's ability to meet its financial and service obligations.

RESEARCH QUESTIONS

The research sought to answer the following questions:

1. Are the current going concern indicators presented in note disclosure guidance appropriate for state and local governments, in light of the fact that, even under severe financial stress, few governments cease to operate when encountering such indicators?
2. What other criteria might better achieve the objective of disclosing severe financial stress uncertainties with respect to governments?
3. What information do financial statement users need with respect to the disclosure of severe financial stress uncertainties?

METHODOLOGY AND LIMITATIONS

The staff employed four methods to gather information: (1) literature review, (2) interviews with representatives of state fiscal monitoring programs, (3) a survey of financial statement users, and (4) case study analyses of a small sample of governments that have experienced bankruptcy or default. The staff research was supplemented with studies conducted by external researchers under four Gilbert W. Crain Memorial Research Grants (Crain Grants). Except for the Crain Grant-funded studies, which will be discussed separately in research findings, the methodology and limitations of each of the four research methods are discussed later in this section.

Literature Review

Existing GASB literature regarding going concern considerations includes guidance about management's responsibilities for evaluating and disclosing uncertainties regarding a government's ability to continue as a going concern. The staff also examined relevant literature from the following standards-setting bodies, which are listed in an alphabetical order:

- Accounting Standards Board (ASB) of Canada
- AICPA
- Federal Accounting Standards Advisory Board (FASAB)
- Financial Accounting Standards Board (FASB)
- International Accounting Standards Board (IASB)
- International Public Sector Accounting Standards Board (IPSASB)
- New Zealand Accounting Standards Board (NZASB)
- Public Company Accounting Oversight Board (PCAOB)
- Public Sector Accounting Board (PSAB) of Canada
- Securities and Exchange Commission (SEC).

The staff also reviewed academic literature on going concern, severe financial stress, and related topics. The academic literature was identified primarily by searching online databases for articles, academic papers, book chapters, state statutes and regulations, conference presentations, and other relevant documents with the assistance of the Financial Accounting Foundation Information Research Center staff. The online resources searched included EBSCOhost's Business Source Corporate, ProQuest Accounting and Tax, and Google Scholar.

Interviews with Representatives of State Monitoring Programs

The staff conducted 10 interviews with representatives of fiscal monitoring programs from 9 states. The interviews sought to obtain feedback about the information used by state monitoring programs to identify local governments experiencing financial stress. The staff chose to employ interviews, rather than a survey of potentially more programs, because interviews allow further exploration of the answers provided by participants. The ability to probe further was valuable during the early exploratory stages of the research.

Under the supervision of the senior research manager and with the review and approval of the director of research and technical activities, the staff developed a general interview protocol prepared according to the procedures in the Research and Technical Activities (RTA) Manual. (The interview protocol is included in Attachment A.) Questions intended to obtain information specific to each program were added to the general protocol for each interview. The interviews were conducted via telephone during March and April 2016.

General Information about the State Monitoring Programs

Types of governments monitored

One program is a voluntary assessment tool that was specifically designed for use by cities or counties. Other types of governments may use the tool, but usage is not monitored by the program representatives. The second program requires all local governments to comply with a statutory audit requirement for monitoring procedures. Those procedures led to the creation of a program to assist local governments in monitoring fiscal health, which currently is not available to school districts. The third program includes all governments, including cities, counties, schools, hospitals, and authorities. The fourth program monitors only school districts.

The remaining five programs monitor a mix of government types, often specific to the types of local governments in each state. Three of those programs monitor cities, villages, and towns; counties; and school districts. One monitors cities, boroughs, townships, towns, and counties, and one monitors cities and towns.

Source of information for monitoring

Seven out of the nine programs obtain information from governments' audited AFRs. Each of the following sources of information also were mentioned:

- Annual update document (unaudited) that local governments are required to submit to the state monitoring program and school districts are required to submit to the state education department by state law
- Direct access to governments' general ledgers
- Bond ratings of municipalities
- Forecasted revenue reports
- Data gathering worksheet that not only collects current accounting data but also requires forecasting and identifying recurring versus one-time revenues
- Surveys of financial condition required by state law.

Selection of Interviewees

The staff identified 19 state financial monitoring programs while conducting the literature review, and via searching Lexus Nexus for relevant state statutes and general search engines for state programs. The staff also sought input from the consultative group to identify known state financial monitoring programs. In selecting the 10 programs to interview, the staff considered three primary characteristics: (1) the robustness of the program; specifically, whether the program was limited to monitoring and reporting or had the ability to assist or intervene with governments identified as experience financial difficulties; (2) the types of governments monitored; and (3) a mix of geographic regions.

Ten interviews were conducted with representatives from monitoring programs in nine states. One of the 10 programs identified by the staff declined to participate because the program was the subject of pending litigation at the time. The staff ultimately conducted two interviews related to a program that requires auditors to perform certain functions of the monitoring procedures: one with a representative from the state program and the other with an auditor of that state governments.

Limitations of the Interviews

The interview methodology has at least two limitations. First, the sample of state monitoring programs was limited to programs identified through the literature review and the search methods employed by the staff. Those methods did not capture all state monitoring programs in existence, particularly those that are not codified into state statutes or do not publish information online. Second, to consider the robustness of the programs, staff relied on information that was readily available, either from preliminary contacts with representatives of the state programs or online sources. Programs that did not publish information online or were not identified in the

literature reviewed by the staff may not have been considered for selection. Because of those limitations, views of representatives of other state monitoring programs that differ from those of representative of the included programs are not reflected in the findings.

Survey of Financial Statement Users

The staff developed a survey to inform all three research questions, particularly the third. Surveys were used because they have the potential to reach a broad group of stakeholders. However, a limitation of surveys is that they do not allow for immediate follow-up questions to clarify the responses obtained from participants. To compensate for that limitation, the surveys included follow-up questions seeking further explanation of the respondents' answers.

The survey instrument was developed based on the procedures set forth in the RTA Manual, under the supervision of the senior research manager and approved by the director of research and technical activities. (The survey instrument is included in Attachment A.) The selection of questions for the survey instrument was informed by the results of the literature review and the interviews with representatives of state monitoring programs. As part of its development, the survey instrument was sent to members of the consultative group for review. Based on the feedback received from consultative group members, some survey questions were reworded or revised for clarity.

The survey was administered online during June–September 2016, and the invitation to participate was publicized in several ways. Invitations were sent to 905 individuals identified as users in the GASB stakeholder database. Members of the Governmental Accounting Standards Advisory Council (GASAC) from the following organizations were asked to assist in publicizing the survey to the members of the organizations:

- American Accounting Association
- Association for Budgeting and Financial Management
- Governmental Research Association
- Investment Company Institute
- National Association of Bond Lawyers
- National Conference of State Legislatures
- National Federation of Municipal Analysts
- Securities Industry and Financial Markets Association.

Reminder emails were sent to users in the GASB stakeholder database two and three weeks after the initial invitation. The initial deadline to complete the survey was August 5, 2016, but was extended by one week to increase the number of responses and was publicized by email to the users in the GASB stakeholder database and through

communication from the GASAC organizations. The survey deadline was extended again by five weeks, with notice of the extension and a reminder one week before the new deadline publicized through emails to users in the stakeholder database. Throughout the survey period, staff periodically emailed respondents who had started but not completed the survey, asking that they complete the survey and providing a link to their unfinished survey.

Descriptive Information about Survey Respondents

Eighty-seven completed surveys were received. At most, the final response rate was 9.6 percent (87 ÷ 905). However, the actual response rate likely was much lower because the number of persons invited through the GASAC organizations is unknown. The types of users responding are shown in Table 1.

Table 1
User Survey Respondents, by Organization Type

Type of Organization	Number of Respondents
Academic—accounting	10
Academic—other than accounting	7
Subtotal, academics	17
Bond counsel	3
Bond insurance/credit enhancement	4
Commercial bank—direct lending	2
Mutual fund	13
Other buy-side	7
Rating agency	1
Private wealth management	2
Sell-side	6
Subtotal, bond industry	38
Legislator or legislative staff—state	9
Oversight entity	3
Subtotal, legislative and oversight	12
Research organization	6
Private citizen	4
Other	10
Total	87

The types of governmental entities evaluated by the survey respondents are shown in Table 2.

Table 2
Types of Governments Evaluated by User Survey Respondents

Type of Government	Number of Respondents
States, counties, cities, other localities, taxing districts, and/or school districts	25
Colleges/universities, toll roads, hospitals, utilities, airports, mass transit, and/or other governments that charge a fee for service (business-type activities)	2
Some or all types of governments in both groups	59
Other	1
Total	87

Limitations of the User Survey

Survey invitations were distributed to individuals identified as users in the GASB's stakeholder database and by GASAC members from user organizations to their respective memberships. Although the surveys were distributed broadly, the results cannot be generalized to the broader population with any degree of certainty for the following reasons:

- The users in the GASB database are a nonrandom sample of the population of users.
- The members of the participating organizations, although broadly representative of the user community, are not nonrandom samples of the user population.
- The response rate to the survey was low (though consistent with many other surveys of users), with no guarantee that the respondents are representative of the population.
- A significant number of respondents (as many as 114) failed to complete the survey, potentially introducing bias into the results because the respondents completing the survey may be different in a relevant way from those that failed to complete the survey.

Case Study Analyses

The staff selected 20 governments for a case study analysis of local general purpose governments (cities, villages, towns) that filed for bankruptcy or defaulted on debt payments in the last twenty years, as identified in one of the Crain Grant-funded studies.

Knowing those governments declared bankruptcy or defaulted on debt payments (hereinafter referred to as a government's significant event), the case study analysis sought to determine whether a trend analysis of certain ratios, for a period leading up to each government's significant event, would identify any strong indicators of severe financial stress that were common for all governments in the sample. An additional objective was to determine whether those governments communicated their severe financial stress in their annual financial reports (AFRs) prior to their respective significant event.

The staff stipulated that for any individual ratio or group of ratios to be considered *strong* indicators of severe financial stress, they would need to meet two criteria: (1) A multiyear trend analysis of such ratios calculated using data collected from the government's AFRs should substantiate the major contributing factors to a significant event, and (2) a clear and definitive pattern from a multiyear trend analysis of such ratios should demonstrate indisputable signs of severe financial stress for all the governments analyzed.

To achieve the objective of the case study analysis, the staff conducted two phases of work: quantitative analysis and qualitative analysis.

Quantitative Analysis

The quantitative analysis involved trend analysis of certain financial ratios calculated using financial data extracted from each sample government's AFRs, certain state agencies, and U.S. Census Bureau reports for 4 to 10 years (depending on the availability of the financial statements) prior to its significant event.

Before the data collection began, one government was removed from the sample of 20 due to the fact that its bankruptcy filing occurred before Statement No. 34, *Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments* took effect. Many data points that would be necessary to analyze that government would not have been available from its AFRs, even if they could have been obtained after more than 20 years. During the data collection process, another government was removed from the sample because the staff could not obtain its AFRs either directly or from other sources (such as a state repository or the Electronic Municipal Market Access database).

The sample was further reduced to 15 after the qualitative analysis (described later in this section) for 3 governments indicated their defaults on debt payments were not due to severe financial stress of the governments, but a decision made by management to discontinue a project financed by the debt. In those cases, one government was the primary obligor, a component unit of one government was the obligor, and another government was a guarantor on conduit debt in which a third party was the obligor. The financial health of those three governments was not otherwise dire. In other words, the ratio and trend analysis would not have detected severe financial stress for those three governments.

To determine which financial ratios to calculate, and hence what data to collect, the staff looked to different resources identified in the literature review as well as the ratios identified in the interviews and survey responses. The staff identified frequently used financial ratios within the most commonly used categories in evaluating a government's severe financial stress. The ratio categories include the following six:

- **Liquidity**—indicates a government's ability to meet financial obligations coming due in the near-term. The data points required to calculate liquidity ratios include unrestricted cash and investments, total receivables, current assets, current liabilities, total liabilities, total revenues, total expenses or expenditures, operating revenues (for enterprise funds), and operating expenses (for enterprise funds).
- **Financial position**—indicates the status of a government's assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position, as displayed in the basic financial statements. The data points required to calculate financial position ratios include total net position (or net assets depending on whether the year in which data were collected is before or after the effective date, December 15, 2011, of Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position*), restricted and unrestricted net position, beginning and ending total net position, beginning and ending restricted and unrestricted net position, total fund balance, unassigned and assigned fund balance, unreserved fund balance, total revenues, total expenses or expenditures, current expenditures, operating revenue, operating expenses, and assessed property value.
- **Financial performance**—indicates a single year's operating results and revenue reliance. The data points required to calculate financial performance ratios include total revenue, total tax revenue, property tax revenue, intergovernmental revenue, investment income, program revenue, current expenditures, total expenses or expenditures, operating revenue, operating expenses, and certain demographic and economic data such as population, personal income, and assessed property value.
- **Solvency–debt burden**—indicates the extent of a government's debt relative to the size of the government and relative to recurring inflows or outflows to pay

debt service. The data points required to calculate debt burden ratios include total debt, general obligation debt, revenue debt, tax-backed debt, debt service expenditures, total revenue, total expenditures, operating revenue, operating income or loss, debt service on revenue bonds (for enterprise funds), revenue bonds' interest expense (for enterprise funds), and certain demographic and economic data such as population and personal income.

- **Solvency–liability burden**—indicates the extent of a government's liabilities relative to the size of the government and relative to the government's assets and net position. The data points required to calculate liability burden ratios include total assets, capital assets, total liabilities, long-term liabilities, noncurrent liabilities, unfunded actuarial accrued liability for pensions and other postemployment benefits (OPEB), or total pension liability or net pension liability, total OPEB liability or net OPEB liability, if available,[2] total net position, unrestricted net position, pension contributions, total revenues, total expenses, covered payroll, and certain demographic and economic data such as assessed property value and personal income.
- **Economics and demographics**—consists of nonfinancial and other relevant data such as population, unemployment rate, assessed property value, and personal income. Those data are useful for trend analysis of the government's overall environment and are used in the calculation of ratios contained in the other categories. Those data were collected from the statistical section of governments' AFRs, certain state agencies and U.S. Census Bureau reports.

The ratios calculated related to individual years in the periods examined, as well as percentage changes in data from year to year and trends in individual-year ratios over the period.

Ratios were calculated, where possible, for the primary government as a whole and its following parts: governmental activities, total governmental funds, general fund, total special revenue funds, total "operating" funds (the combination of general fund and total special revenue funds), business-type activities (BTAs), each major enterprise fund, and total nonmajor enterprise funds. The information for those ratios was collected from most financial statements, certain note disclosures, certain required supplementary information (RSI), and certain supplementary information (SI).

The number of ratios or trends calculated in each of the six categories varies from one government to another, for several reasons:

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[2] The period examined for some of the governments fully or partially preceded the effective dates of Statement No. 68, *Accounting and Financial Reporting for Pensions* and Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

1. The number of major enterprise funds for each government varied from none to four.
2. Certain demographic and economic data is not published for smaller governments.
3. Despite rigorous efforts, some AFRs for the 10 years leading up to and including the significant event year could not be obtained for some governments.

The number of ratios calculated in each category and for each part of the government (as well as for pensions and OPEB) for a single year are presented in Table 3.

Table 3
Number of Ratios in Each Category for One Year,
By Part of the Government (and Pensions and OPEB)

	Liquidity	Financial Position	Performance	Solvency—Debt Burden	Solvency—Liability Burden	Demographic and Economic Data, if available	Total
Primary Government	6	15	11	-	2	5	**39**
Governmental Activities	7	15	12	9	10	-	**53**
Total Governmental Funds	5	8	18	2	-	-	**33**
General Fund	2	5	8	-	-	-	**15**
Total Special Revenue Funds	2	5	8	-	-	-	**15**
Total Operating Funds	2	5	8	-	-	-	**15**
BTAs	8	15	7	9	10	-	**49**
Each Major Enterprise Fund	10	15	3	3	-	4	**35**
Total Nonmajor Enterprise Funds	10	15	3	3	-	-	**31**
Pension and OPEB Information in Notes, RSI, or SI	-	-	-	-	10	-	**10**
Total	**52**	**98**	**78**	**26**	**32**	**9**	**295**

The staff collected up to approximately 600 data points per year in the trend for each government to calculate those 295 ratios. As many as 200 data points were collected for major enterprise funds alone, depending on the number of funds reported by a government.

Qualitative Analysis

The second phase of the case study analysis was to conduct a qualitative analysis for each sample government to identify major factors contributing to that government's significant event. That analysis also included a review of management's discussion and analysis (MD&A) and note disclosures to identify relevant information about each government's severe financial stress.

To conduct the qualitative analysis, the staff searched the internet to obtain various reports and articles discussing the background, historical context, causes, ramifications, subsequent developments, and other relevant aspects of each government's significant event. Using that information, the staff composed an in-depth analysis of each government's significant event, including a detailed discussion of each major contributing factor. Furthermore, after the multiyear trend and ratio analysis was completed for each government, it was compared to the major contributing factors discussed in the qualitative analysis to determine if the ratio and trend analysis would substantiate each major contributing factor.

Limitations of the Case Study Analyses

The case study analysis was designed to achieve the specific objectives as described earlier in the paper using a small sample of governments known to have experienced bankruptcy or default. There are at least three limitations to this analysis as follow:

- The population from which the sample of governments was drawn was not a complete list of all governments that have experienced bankruptcy or default for the period studied.
- The sample was not selected using a statistical method, which means the findings from the analysis may not have statistical significance to the entire population of governments that experienced bankruptcy or default or to other governments that have not experienced bankruptcy or default.
- The ratio and trend analysis and the qualitative analysis required a certain level of professional judgment, which is subjective by definition. If the analyses were performed by different individuals, certain conclusions drawn from the analyses may not have been exactly the same.

Due to those limitations, the findings from the case study analyses were not meant to be generalized to the entire population of governments or those that experienced bankruptcy or default in the last 20 years.

RESEARCH FINDINGS

Research Question 1: Sufficiency of Current Guidance on Going Concern Indicators

Findings included here are intended to answer the first research question: Are the current going concern indicators presented in note disclosure guidance appropriate for state and local governments, in light of the fact that, even under severe financial stress, few governments cease to operate when encountering such indicators?

Literature Review

Existing GASB Guidance

Paragraphs 16–19 of GASB Statement 56 discuss the assumption of going concern, possible trends or indicators that may signal substantial doubt that an entity will continue as a going concern, and disclosure requirements for entities if that substantial doubt exists:

> Continuation of a legally separate governmental entity as a going concern is assumed in financial reporting in the absence of significant information to the contrary. Information that may significantly contradict the going concern assumption would relate to a governmental entity's inability to continue to meet its obligations as they become due without substantial disposition of assets outside the ordinary course of governmental operations, structuring of debt, submission to the oversight of a separate fiscal assistance authority or financial review board, or similar actions. Financial statement preparers have a responsibility to evaluate whether there is substantial doubt about a government's ability to continue as a going concern for 12 months beyond the financial statement date. Moreover, if there is information that is currently known to the government that may raise substantial doubt thereafter (for example, within an additional three months), it also should be considered.
>
> Indicators that there may be substantial doubt about a government's ability to continue as a going concern include:
>
> a. Negative trends—for example, recurring periods in which expenses/expenditures significantly exceed revenues, recurring unsubsidized operating losses in business-type activities, consistent working capital deficiencies, continuing negative operating cash flows from business-type activities, or adverse key financial ratios
> b. Other indications of possible financial difficulties—for example, default on bonds or similar loan agreements, proximity to debt and tax limitations, denial of usual trade credit from suppliers, restructuring of debt (other than refundings), noncompliance with statutory capital or reserve requirements, or the need to seek new sources or methods of financing or to dispose of financial assets
> c. Internal matters—for example, work stoppages or other labor difficulties, substantial dependence on the success of a particular project or program, uneconomic long-term commitments (burdensome labor contracts, for example) or the need to significantly revise operations
> d. External matters—for example, legal proceedings, legislation, or similar matters that might jeopardize intergovernmental revenues and the fiscal sustainability of key governmental programs; loss of a critical license or

patent for a business-type activity; loss of a principal customer, taxpayer, or supplier; or uninsured or underinsured catastrophe such as a drought, earthquake, or flood.

In all cases, the effect of the governmental environment should be considered when evaluating the indicators. For example, the taxing power and borrowing capabilities of governments together with the constant demand for the provision of public services are factors that may diminish the possibility that a government would be unable to continue as a going concern. Some conditions or situations identified in the indicators in paragraph 17 should be assessed differently for governments. For example, recurring operating losses are commonplace for some business-type activities such as transit operations or governmental healthcare organizations. However, quality-of-life considerations and the health and welfare needs and interests of the citizenry may create compelling incentives for those operations to be subsidized to the extent necessary by another governmental entity.

If it is determined that there is substantial doubt about a governmental entity's ability to continue as a going concern, the notes to the financial statements should include disclosure of the following as appropriate:

a. Pertinent conditions and events giving rise to the assessment of substantial doubt about the entity's ability to continue as a going concern for a reasonable period of time, as discussed in paragraph 16
b. The possible effects of such conditions and events
c. Government officials' evaluation of the significance of those conditions and events and any mitigating factors
d. Possible discontinuance of operations
e. Government officials' plans (including relevant prospective financial information)
f. Information about the recoverability or classification of recorded asset amounts or the amounts or classification of liabilities.

In addition, Statement 34, paragraph 11(h), requires a discussion in MD&A of currently known facts, decisions, or conditions that are expected to have a significant effect on the government's financial position or results of operations. It may be necessary to include a discussion of going concern issues in the MD&A, depending on the facts and circumstances.

FASB

Going concern

Similar to the purpose of GASB Statement 56, FASB Accounting Standards Update (ASU) No. 2014-15, *Presentation of Financial Statements—Going Concern (Subtopic*

205-40), Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern, was part of the FASB's efforts to transfer accounting and financial reporting guidance from auditing standards to the Accounting Standards Codification®. However, the FASB reexamined the going concern guidance that the GASB incorporated largely as is, resulting in this ASU and ASU No. 2013-07, *Presentation of Financial Statements (Topic 205): Liquidation Basis of Accounting*.

ASU 2014-15 provides that management shall evaluate whether there are events or conditions that may raise substantial doubt regarding an entity's ability to continue as a going concern within one year after the date that the financial statements are issued (or within one year after the date that the financial statements are available to be issued, when applicable). In making this determination, management should consider the factors identified in ASC 205-40-50-5:

> When evaluating an entity's ability to meet its obligations, management shall consider quantitative and qualitative information about the following conditions and events, among other relevant conditions and events known and reasonably knowable at the date that the financial statements are issued:
>
> a. The entity's current financial condition, including its liquidity sources at the date that the financial statements are issued (for example, available liquid funds and available access to credit)
> b. The entity's conditional and unconditional obligations due or anticipated within one year after the date that the financial statements are issued (regardless of whether those obligations are recognized in the entity's financial statements)
> c. The funds necessary to maintain the entity's operations considering its current financial condition, obligations, and other expected cash flows within one year after the date that the financial statements are issued
> d. The other conditions and events, when considered in conjunction with (a), (b), and (c) above, that may adversely affect the entity's ability to meet its obligations within one year after the date that the financial statements are issued.

ASU 2014-15 provides examples of conditions or events that may raise doubt about an entity's ability to continue as a going concern in ASC 205-40-55-2:

> . . . An entity should weigh the likelihood and magnitude of the potential effects of the relevant conditions and events, and consider their anticipated timing.

a. Negative financial trends, for example, recurring operating losses, working capital deficiencies, negative cash flows from operating activities, and other adverse key financial ratios
b. Other indications of possible financial difficulties, for example, default on loans or similar agreements, arrearages in dividends, denial of usual trade credit from suppliers, a need to restructure debt to avoid default, noncompliance with statutory capital requirements, and a need to seek new sources or methods of financing or to dispose of substantial assets
c. Internal matters, for example, work stoppages or other labor difficulties, substantial dependence on the success of a particular project, uneconomic long-term commitments, and a need to significantly revise operations
d. External matters, for example, legal proceedings, legislation, or similar matters that might jeopardize the entity's ability to operate; loss of a key franchise, license, or patent; loss of a principal customer or supplier; and an uninsured or underinsured catastrophe such as a hurricane, tornado, earthquake, or flood.

IPSASB

International Public Sector Accounting Standards No. 1, *Presentation of Financial Statements,* paragraphs 38–41, provides guidance for those who are responsible for preparing the financial statements when considering whether an entity will continue as a going concern.

> When preparing financial statements, an assessment of an entity's ability to continue as a going concern shall be made. This assessment shall be made by those responsible for the preparation of financial statements. Financial statements shall be prepared on a going concern basis unless there is an intention to liquidate the entity or to cease operating, or if there is no realistic alternative but to do so. When those responsible for the preparation of the financial statements are aware, in making their assessment, of material uncertainties related to events or conditions that may cast significant doubt upon the entity's ability to continue as a going concern, those uncertainties shall be disclosed. When financial statements are not prepared on a going concern basis, that fact shall be disclosed, together with the basis on which the financial statements are prepared and the reason why the entity is not regarded as a going concern.
>
> Financial statements are normally prepared on the assumption that the entity is a going concern and will continue in operation and meet its statutory obligations for the foreseeable future. In assessing whether the going concern assumption is appropriate, those responsible for the preparation of the financial statements take into account all available information about the future, which is at least, but is not limited to, twelve months from the approval of the financial statements.

The degree of consideration depends on the facts in each case, and assessments of the going concern assumption are not predicated on the solvency test usually applied to business enterprises. There may be circumstances where the usual going concern tests of liquidity and solvency appear unfavorable, but other factors suggest that the entity is nonetheless a going concern. For example:

a. In assessing whether a government is a going concern, the power to levy rates or taxes may enable some entities to be considered as a going concern, even though they may operate for extended periods with negative net assets/equity; and
a. For an individual entity, an assessment of its statement of financial position at the reporting date may suggest that the going concern assumption is not appropriate. However, there may be multi-year funding agreements or other arrangements in place that will ensure the continued operation of the entity.

The determination of whether the going concern assumption is appropriate is primarily relevant for individual entities rather than for a government as a whole. For individual entities, in assessing whether the going concern basis is appropriate, those responsible for the preparation of financial statements may need to consider a wide range of factors relating to (a) current and expected performance, (b) potential and announced restructurings of organizational units, (c) estimates of revenue or the likelihood of continued government funding, and (d) potential sources of replacement financing before it is appropriate to conclude that the going concern assumption is appropriate.

IASB

Paragraphs 25 and 26 of International Accounting Standard (IAS) No. 1, *Presentation of Financial Statements,* discuss the requirements of management when making the determination of whether an entity will continue as a going concern.

When preparing financial statements, management shall make an assessment of an entity's ability to continue as a going concern. An entity shall prepare financial statements on a going concern basis unless management either intends to liquidate the entity or to cease trading, or has no realistic alternative but to do so. When management is aware, in making its assessment, of significant uncertainties related to events or conditions that may cast significant doubt upon the entity's ability to continue as a going concern, the entity shall disclose those uncertainties. When an entity does not prepare financial statements on a going concern basis, it shall disclose that fact, together with the basis on which it prepared the financial statements and the reason why the entity is not regarded as a going concern.

> In assessing whether the going concern is appropriate, management takes into account all available information about the future, which is at least, but is not limited to, twelve months from the end of the reporting period. The degree of consideration depends on the facts in each case. When an entity has a history of profitable operations and ready access to financial resources, the entity may reach a conclusion that the going concern basis of accounting is appropriate without detailed analysis. In other cases, management may need to consider a wide range of factors relating to current and expected profitability, debt repayment schedules and potential sources of replacement financing before it can satisfy itself that the going concern basis is appropriate.

FASAB

The FASAB does not provide financial reporting guidance on going concern for the federal government. In paragraphs A5–A7 of the Basis for Conclusions of Statement of Federal Financial Accounting Standards (SFFAS) No. 39, *Subsequent Events: Codification of Accounting and Financial Reporting Standards Contained in the AICPA Statements on Auditing Standards*, the FASAB states that going concern does not apply to federal government financial reporting and, therefore, the FASAB decided not to include the AICPA's going concern standard in its financial reporting guidance.

PSAB of Canada

Going concern

The PSAB provides the following guidance, which is in paragraph .63 of Section PS 1000, *Financial Statement Concepts,* in the Chartered Professional Accountants Canada Public Sector Accounting Handbook:

> Financial statements are prepared on the assumption that the government is a going concern, meaning it will continue in operation, and will be able to realize assets and discharge liabilities and meet its statutory obligations in the normal course of operations for the foreseeable future.

ASB of Canada

The ASB has adopted the IASB's guidance on going concern for private enterprises. However, the following going concern guidance is provided for not-for-profit organizations in paragraphs .07–.09 of Section 1401, *General Standards of Financial Statement Presentation for Not-for-Profit Organizations* in the Chartered Professional Accountants (CPA) Canada Handbook*:*

> When preparing financial statements, management shall make an assessment of an entity's ability to continue as a going concern. Financial statements shall be prepared on a going concern basis unless management either

intends to liquidate the entity or to cease operating, or has no realistic alternative to do so.

In assessing whether the going concern assumption is appropriate, management takes into account all available information about the future, which is at least, but is not limited to, twelve months from the date of the statement of financial position. The degree of consideration depends on the facts in each case. When an entity has a history of revenues exceeding expenses and ready access to financial resources, a conclusion that the going concern basis of accounting is appropriate may be reached without detailed analysis. In other cases, management may need to consider a wide range of factors relating to current and expected results from operations, debt repayment schedules and potential sources of replacement financing before it can satisfy itself that the going concern basis is appropriate.

For a not-for-profit organization, a history of revenues received in excess of costs of the organization's service delivery activities and ready access to financing may demonstrate that the going concern basis of accounting is appropriate without detailed analysis. In other cases, management of a not-for-profit organization may need to consider a wide range of factors relating to its cash flow requirements in order to continue providing services and to discharge its stewardship responsibilities. These factors would include other potential funding arrangements.

NZASB

Public Benefit Entity International Public Sector Accounting Standard No. 14, *Events After the Reporting Date,* provides that an entity that is assessing whether it will continue as a going concern should consider its current and expected performance, plans to restructure any of its organizational units, and the likelihood that the entity will continue to receive funding. If an entity receives the majority of its funding from a single source, going concern should only be a consideration if that funding source has plans to cease operations. If an entity is funded mainly by its own-source revenues and also charges user fees, a decline in its financial condition and results of operations may indicate that the entity should consider whether it is still a going concern.

SEC

Regulation S-K

Regulation S-K 303(a) of the SEC Code of Federal Regulations contains requirements that SEC registrants must comply with when presenting MD&A in their annual reports. Registrants are mandated to disclose information about their (1) financial condition, (2) changes in financial condition, and (3) results of operations. Registrants also must provide the following additional information:

- Liquidity: known trends or demands, commitments, events, or uncertainties that will result in or that are reasonably likely to result in the registrant's liquidity increasing or decreasing in any material way
- Capital resources: material commitments for capital expenditures as of the end of the latest fiscal period, the general purpose of such commitments, and the anticipated source of funds needed to fulfill such commitments
- Results of operations: unusual or infrequent events or transactions or any significant economic changes that materially affected the amount of reported income from continuing operations and, in each case, the extent to which income was so affected; also, any known trends or uncertainties that have had or that the registrant reasonably expects will have a material favorable or unfavorable impact on net sales or revenues or income from continuing operations
- Off-balance sheet arrangements: arrangements that have or are reasonably likely to have a current or future effect on the registrant's financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources that is material to investors
- Tabular disclosure of information about the registrant's contractual obligations as of the latest fiscal year-end balance sheet.

AICPA and PCAOB

The AICPA provides guidance for auditors of private companies to determine whether there is substantial doubt that an entity will continue as a going concern. This guidance is provided in Auditing Standards Codification (AU-C) Section No. 570, *The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern*.

The PCAOB also provides guidance for auditors when conducting that evaluation. The guidance is found in Auditing Update (AU) 341, *The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern*.

Both the AICPA and PCAOB guidance identify possible trends that an auditor can evaluate; those same trends are found in paragraph 205-40-55-2 of FASB ASU 2014-15, as presented previously in this section.

Academic Research

We did not find academic literature regarding going concern uncertainties specifically relevant to governments. The GASB awarded two Crain Grants to fund research to fill that gap: (1) a study of the prevalence of government GCOs and the reasons for them and (2) a study of the prevalence of government dissolutions and the factors that caused them.

Going Concern Opinions in Government

The first study was conducted by Nancy Chun Feng and Daniel Neely in 2014. This research was intended to ascertain the frequency of GCOs for state and local governments to investigate factors that influence decisions by auditors to issue going concern opinions to, as well as the related disclosure of going concern uncertainties by the state and local governments receiving the going concern opinions.

To identify state and local governments that have received GCOs, the researchers reviewed all submissions to the Federal Audit Clearinghouse between 1996 and 2013 and confirmed that GCOs are rare for governments. The researchers also found that auditors used seven major categories of justifications to issue a GCO, with deficiency in funds and losses or revenue declines accounting for the majority of GCOs. Most governments that received a GCO disclosed in notes to financial statements or MD&A the reasons for receiving a GCO in the year they received it; a majority also mentioned those issues in the financial report for the year prior to receiving the GCO.

Data collection

Feng and Neely identified a total of 318 data collection forms that indicated a GCO had been issued. The researchers then attempted to obtain the AFRs for those 318 data collection forms. Although auditees are required to upload AFRs as part of the data collection form submittal, prior to 2014 these AFRs were not retained and made downloadable from the clearinghouse. The researchers, with the assistance of GASB staff, were able to collect 133 AFRs from governments' websites or state depositories. However, the audit report for 35 of the AFRs did not contain going concern language, although the data collection form indicated a GCO. The remaining sample of AFRs with GCOs was 98.

In several cases, Feng and Neely noted that a government received more than one GCO during the period reviewed. One government received 10 GCOs, and another 18 governments received 2 GCOs during the time period. In total, the sample contained 45 unique governments receiving the 98 GCOs.

Results

Through review of the audited financial statements of the entities receiving GCOs, Feng and Neely identified seven categories of justification provided by the audit report for the GCO. Those categories, their definitions, and their frequency of appearance are summarized in Table 4.

Table 4
Frequency of Going Concern Opinions, by Category of Justification

Category Name	Category Definition	Frequency*
Deficiency in funds	Insufficiently low level of funds	44
Losses or revenue declines	Reduction in funds	42
State oversight	Direct state actions	29
Going concern given to part of the organization	Opinion covers only part of the government (e.g.: component unit)	24
Debt issues	Failure to meet debt obligations	13
Legal	Court actions, including filing for bankruptcy	9
Cash shortage	Explicitly mention a lack of cash	7

**Some GCOs list more than one justification; therefore, the total will not equal 98.*

Feng and Neely then evaluated the notes to financial statements and MD&A for the governments in both the year of the GCO and the year preceding the GCO. In general, they found that most governments included the disclosure of the going concern considerations in notes to financial statements in the year in which the GCO was issued. A smaller, but still substantial majority mentioned the reasons that led to the GCO in the preceding year's notes. Table 5 shows the percentage of governments including disclosure in each year by the categories defined by the researchers.

Table 5
Frequency of Going Concern Disclosures, by Category and Year

Category	Disclosed in Notes in Year of GCO	Disclosed in Notes in Year Preceding GCO
Deficiency in funds	95.5%	68.2%
Losses or revenue declines	85.7%	52.4%
State oversight	100%	65.5%
Going concern to part of organization	75.0%	75.0%
Debt issues	84.6%	69.2%
Legal	100%	66.7%
Cash shortage	100%	57.1%

Feng and Neely also examined the MD&A of each government in the year in which the government received the GCO and in the preceding year. A lower percentage of governments mentioned going concern in MD&A in both years compared to note disclosures. Table 6 shows the percentage of governments including discussion of the going concern uncertainty in the MD&A for the year in which the GCO was received and the preceding year by the same categories used above:

Table 6
Frequency of Discussion of Going Concern in MD&A, by Category and Year

Category	Discussed in MD&A in Year of GCO	Discussed in MD&A in Year Preceding GCO
Deficiency in funds	68.2%	52.3%
Losses or revenue declines	54.8%	42.9%
State oversight	58.6%	34.5%
Going concern to part of organization	41.7%	33.3%
Debt issues	30.8%	23.1%
Legal	100%	66.7%
Cash shortage	85.7%	14.3%

Although the research has certain limitations, it supports the idea that relatively few governments receive audit opinions with emphasis paragraphs regarding going concern uncertainties. Some governments received multiple GCOs, which may indicate that governments rarely cease operations, even when faced with severe financial stress. Instances of governments receiving a GCO in succeeding years may suggest some confusion regarding the nature of a going concern.

Government Dissolutions

The second study, on government dissolutions, was conducted by Amanda Beck and Mary Stone. The intention of this research was to provide context for the prevalence of GCOs by exploring the frequency of governments ceasing to exist and the reasons why. Beck and Stone identified 132 dissolutions of general-purpose local governments between 2002 and 2012 using Census of Governments (COG) data and a list of municipalities that dissolved in a prior study. (See Table 7.)

Table 7
General Purpose Government Dissolutions, 2002–2012

Type of Dissolution	Number	Percentage
Mergers (with a continuing government)	30	22.7%
Consolidations (creating a new government)	10	7.6%
Dissolutions without replacement	92	69.7%
Total dissolutions	132	100%

Beck and Stone identified three types of dissolution: consolidation, merger, and dissolution without replacement.[3] "Dissolutions without replacement" are those for which there was no indication that the government's operations were transferred to another entity; in other words, a government "going out of business." Ninety-two of the 132 general purpose government dissolutions (70 percent) were dissolutions without replacement. The researchers found that dissolutions without replacement tended to affect smaller communities: On average, municipalities that dissolved without replacement were considerably smaller than those that merge or consolidate.

The researchers analyzed why those governments dissolves, placing them in one or more of six categories: (1) seeking greater efficiency, (2) low participation in local government, (3) population exodus, (4) financial distress, (5) forced by state or county, and (6) other. The primary reason for a dissolution was category (1). (See Table 8.)

It is worth noting that the researchers found it difficult to examine category (4), financial distress, as an isolated reason for dissolution. Financial distress often occurs in tandem with a declining population and a shrinking tax base. Financial distress also may accompany citizens' demands for more services or desire to improve efficiency; citizens may not have a thorough understanding of the financial pressures a dissolving municipality faces. The researchers found that financial distress appeared to be the *sole* motivation for dissolution in only four cases, and they suspected one reason for this could be dissolution did not absolve taxpayers of the municipality's liabilities.

Unexpectedly, the research found that in relatively few cases—13 of 132 dissolutions—financial distress was the primary driver behind a municipality's decision to dissolve. The researchers noted that the current GCO guidance focuses on an entity's inability to remain financially viable, whereas their research found that many municipalities dissolve for reasons not directly related to financial distress.

[3] Using the terminology in GASB Statement No. 69, *Government Combinations and Disposals of Government Operations*, "consolidations" in this research would be government mergers that create a new government and "mergers" would be government mergers in which a government continues.

Table 8
Reasons for General Purpose Government Dissolutions, 2002–2012

Reason for Dissolution	Number*	Percentage
Citizens seeking greater efficiency	71	53.8%
Low participation in government	47	35.6%
Population exodus	19	14.4%
Financial distress	13	9.8%
Forced by state or county	7	5.3%
Other:	23	17.4%
Natural disasters such as flood or public health concerns such as lead contamination	5	21.7%
In response to general citizen discontent	6	26.1%
Consequence of fraud or mismanagement, which sometimes was accompanied by financial distress	8	34.8%
Various other unique reasons	4	17.4%

**Some dissolutions had more than one justification; therefore, the total will not equal 132.*

Beck and Stone were able to obtain AFRs for 20 dissolved municipalities. Only one of the AFRs obtained included a GCO. They also searched for dissolved municipalities in the Federal Audit Clearinghouse database and found 38 audits submitted by 14 of the dissolved cities in the sample of 132. None of the 38 audits received a GCO. However, the financial statements obtained showed a lack of consistency in how dissolution decisions were disclosed and, therefore, it was difficult to determine whether the dissolutions were a result of the governments' going concern uncertainties.

Beck and Stone also investigated the influence of state law on a governmental entity's legal ability to dissolve and found that state laws determine the path to dissolution by mandating the conditions that must exist for a general purpose government to dissolve and the steps that must be taken, both before and after dissolution. They noted an increasing number of states have programs to monitor the financial condition of governments or encourage merger, consolidation, or annexation of governments too small or financially stressed to provide services efficiently.

In addition to general purpose governments, Beck and Stone also studied dissolutions of school districts and special districts. Because states are responsible for making public education available to all primary and secondary students within their boundaries, a school district is not dissolved without providing alternative educational opportunities for affected students. School district dissolutions therefore differ from general purpose government dissolutions in the level of state involvement and the requirement that services must be arranged for affected students. Similar to general purpose governments, school districts sometimes dissolve through consolidation or merger, but may also be restructured through reconstitution or takeover. The

researchers found that the number of school districts decreased from 117,108 in 1940 (the first year for which statistics are available) to 13,515 in 2013 (the most recent year for which data was available when the study was conducted).[4] The researchers attributed the decline to the closing of small rural districts and an educational philosophy that consolidation increases efficiency, decreases costs, and provides greater educational opportunities.

Special districts differ from general purpose governments and school districts because they generally are formed by one or more general purpose governments and authorized by state law to provide a single or limited number of designated functions (such as fire protection, water supply, wastewater treatment, parks, libraries, and so on). The 2012 COG shows that special districts are the most common form of local government—over 42 percent of all governments.[5]

Beck and Stone compared the 2007 and 2012 COGs to identify the special districts listed in 2007, but not in 2012, as possible dissolutions. They 1,532 potential special district dissolutions, representing about 4 percent of the special district governments in the 2007 COG. The researchers categorized the 1,532 dissolved special districts into 14 groups: conservation, development, education, flood control, health, housing, local management, ports, public safety, recreation, roadways, transport, utilities, and other (for example, mosquito abatement). The utilities category accounts for the most dissolutions, with approximately 417 (27 percent), followed by local management (300 or 20 percent), public safety (157 or 10 percent), and conservation (129 or 8 percent).

Overall, the researchers found that relatively few governments cease to be going concerns in the sense that they dissolve without arrangements to ensure that the needs of affected citizens continue to be met. Based on the analysis of state laws pertaining to dissolution, annexation, merger, consolidation, bankruptcy, and state intervention, the researchers suggested that GASB consider replacing the expression "going concern" with the expression "ability to continue as an independent entity" or "ability to continue providing generally expected levels of service."

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[4] Based on COG data, most of that decline had occurred by 1972. The number of school districts reported in the COG decreased 4.6 percent from 13,506 in 2002 to 12,880 in 2012. By comparison, in that period, local governments decreased by less than 0.2 percent, county governments decreased 0.01 percent, and special districts *increased* 9.2 percent (despite the dissolution of over 1,500, per Beck and Stone's findings). Sources: 2002 Census of Governments, Volume 1, Number 1, *Government Organization* (DC: U.S. Census Bureau, December 2002); and 2021 Census of Governments–Organization, https://www.census.gov/data/tables/2012/econ/gus/2012-governments.html, accessed September 7, 2021.

[5] The COG category *special district* is a combination of governments operating as (1) business-type activities and (2) governmental activities taxing districts.

The analysis of municipalities dissolving without replacement further suggests that the term "ability" in the context of "government's ability to continue as a going concern" may need to be understood broadly to include local citizens' commitment to the continuation of the entity, as well as financial ability to continue operations. Some dissolutions occur because citizens are unwilling to serve in elected offices or have lost faith in the quality and breadth of services provided by their municipality. Although those conditions may be accompanied by financial distress, the researchers observe that even a financially distressed entity is unlikely to dissolve if the citizens are engaged and committed to the entity's continuation. The researchers found this particularly important given that most dissolution proceedings are initiated by citizens, according to their study.

Interviews of State Monitoring Programs

The interviews with 10 representatives from state fiscal monitoring programs revealed that the state monitoring programs use a combination of information that is identified in the current guidance on going concern indicators (though, not because of the guidance) and other indicators to identify governments experiencing financial stress.

Overall, responses from the interviews provide general information about the state monitoring programs, which was presented in methodology and limitation section of this paper. That information helped explain why those programs use factors that are included in current guidance, such as (1) indicators of financial stress, (2) trend analysis, and (3) other information that would be valuable in predicting financial stress.

Indicators of Financial Stress

All of the interviewees indicated that their programs have a specific set of indicators that are used to assess the financial stress of governments. (A comprehensive list of all the indicators used by the nine monitoring programs is provided in Attachment A to this paper.) Interviewees were asked to identify the specific ratios or indicators they believed were the best predictors of financial stress. Two interviewees stated that there is not a single best indicator, or group of indicators, to assess the financial stress of the government. The indicators that are the best predictors of financial stress cited by the other interviewees includ items identified in the existing going concern guidance. They are grouped into the following broad categories with similar characteristics:

- Financial position
- Revenues and expenses/expenditures
- Liquidity and cash flows
- Debt burden
- Liability burden

Financial position

Eight interviewees stated that fund balance indicators are among the best indicators of financial stress. Two interviewees specified that fund balance is the most effective predictor of financial stress or is given significant weight in the program evaluation. Five of the 10 interviewees stated that they focus on the general fund balance and two interviewees focus on the enterprise fund net position.

The following are specific calculations of financial position measures mentioned by the interviewees as indicators of financial stress comparable to those in the going concern guidance:

- (Unassigned fund balance + assigned fund balance) ÷ net operating expenditures
- Available[6] fund balance ÷ (total expenditures + transfers out)
- (General fund liabilities + deferred inflows) > (general fund assets + deferred outflows)
- Enterprise fund liabilities > enterprise fund assets
- (General fund assigned fund balance + unassigned fund balance) ÷ gross expenditures
- General fund total fund balance ÷ gross expenditures
- Assigned and unassigned general fund balance over time
- Declining fund balance.

Revenues and expenses/expenditures

Four interviewees identified the occurrence of expenditures in excess of revenues as a potential indicator of financial stress. One interviewee specified that the development of their monitoring program was to focus on whether the government has enough revenues to meet its expenses/expenditures.

The following are the specific indicators of financial stress involving revenue or expense/expenditures mentioned by the interviewees as the best predictors that are comparable to those in the going concern guidance:

- Operating deficit or surplus: (net operating revenues – temporary revenues – net operating expenditures – unbudgeted current liabilities) ÷ net operating revenue
- (Expenses/Expenditures – revenues) ÷ revenues
- Expenses/Expenditures > revenues
- (Revenue + other financing sources) – (expenditures + other financing uses).

[6] The program defines available fund balance as (cash + investments) – (liabilities + encumbrances + deferred revenue arising from cash receipts).

Liquidity and cash flows

Three interviewees identified liquidity or cash flow indicators among the best indicators of financial stress. The following specific liquidity or cash flow indicators were identified as best predictors of financial stress that are comparable to those in the going concern guidance:

- (Cash + investments) ÷ current liabilities
- Cash ÷ average monthly expenditures
- Cash flows from operations for enterprise funds.

Debt burden

Five of the interviewees identified debt burden measures as indicators of financial stress. Four interviewees identified ratios or other calculations involving debt and three interviewees identified certain events related to a government's outstanding debt.

The following are specific ratios or other calculations related to debt burden measures mentioned by interviewees as the best predictors of financial stress that are comparable to those in the going concern guidance:

- Governmental fund debt service payments in excess of 12 percent of revenues
- Debt ÷ total general fund revenues
- Debt service ÷ total revenues
- Bonded debt in excess of 6 percent of the estimated market value of taxable property
- Long-term debt per capita.

The following events associated with a government's outstanding debt also were identified by interviewees as the best predictors of financial stress that are comparable to those in the going concern guidance:

- Bond rating downgrade
- Default on payment of principal or interest on any bonds or notes or payment of rentals due to any authority.

Liability burden

Three interviewees indicated personnel costs or liabilities other than debt were used to indicate financial stress. One interviewee stated that the impact on net position from the recording of the pension liability is a new indicator to identify financial stress.

The following measure and events associated with the government's personnel costs or liabilities other than debt were identified as the best indicators of financial stress that are comparable to the going concern guidance:

- Personnel services and benefits costs ÷ total revenues
- Missed payroll for 30 days
- Failure to make required payments to judgment creditors for 30 days beyond the date of the judgment
- Failure to forward taxes withheld on the income of employees or failure to transfer employer or employee contributions for social security.

Use of Trend Analysis

The existing guidance includes negative trends as one of the indicators that there may be substantial doubt about a government entity's ability to continue as a going concern. All 10 of the interviewees emphasized the importance of using historical trend information to understand the potential financial stress faced by local governments.

Eight of the interviewees provided specific examples of the number of years of information used to perform trend analysis: three of the interviewees stated they use three years; four interviewees specified five years; and one interviewee stated a range of three to five years, depending on the measure.

Other Information That Would Be Valuable in Predicting Financial Stress

The interviewees were asked what other information would be valuable in the monitoring process that is not currently available to them. Three interviewees described information that either is not included in AFRs or not collected by the monitoring program documents, including labor contracts and concentration of customers or users. Labor difficulties and loss of a principal customer are included as examples in the existing going concern guidance for internal and external matters.

Survey of Financial Statement Users

Of the 87 user survey respondents, 41 (47 percent) have evaluated a government's financial statements that contained a going concern note disclosure. Those respondents were asked how valuable the information in that note is to their analyses, decision making, or assessments of accountability. Respondents generally find the disclosures to be valuable, as indicated by the average rating of 3.71 on a scale of 1 to 5, 5 being the highest rating. (See Table 9).

Table 9
Value of Information about Going Concern Disclosures

Not valuable at all (1)	(2)	(3)	(4)	Very valuable (5)	Average
5	4	7	7	18	3.71

The 16 respondents who answered 3 or below were asked how the information in the note could be made more valuable. Respondents provided the following suggestions:

- The disclosures should provide more specific details regarding the situation that led to the going concern uncertainties or management's plans to remediate the situation.
- The disclosures should include trend information or projected budgets.
- The disclosures should be more timely.

The other 25 respondents (61 percent) who answered 4 or 5 were asked how they use the information in the note. Those respondents indicated that the information in the note was used to assess a government's financial condition, operating results, and ability to meeting its ongoing commitments, determine municipal bonds investment decisions and credit rating assessments, as well as legislative or oversight responses. Those respondents also noted that the information disclosed helped them understand the reasons for the going concern uncertainty and the likelihood that management's plans to remediate the concerns were realistic. Specific uses within those categories included:

- Ascertain the degree of financial stress and the government's ability to implement a successful plan to meet commitments and return to solvency
- Evaluate the fairness of the government's financial position and operating results as presented in the context of our overall rating assessment of the issuer's debt repayment capacity, as well as the potential impact on linked governmental units, if any
- Assess how governments determine their ability to meet ongoing commitments
- Key factor in deciding to buy or continue to hold the municipalities bonds.
- Determining if a sell recommendation is appropriate to make to their clients.

The 41 respondents who have evaluated a government with a going concern note disclosure also were asked questions regarding the length of time applied to the evaluation of a government's ability to continue as a going concern. A slight majority of

respondents, 21 (51 percent), noted that a period of 12 months beyond the financial statement date is appropriate for the evaluation of a government's ability to continue as a going concern. That is consistent with the requirements of Statement 56, which stipulate 12 months beyond the financial statement date or shortly thereafter (for example, within an additional 3 months). Of the other 20 respondents, 15 (37 percent) stated that 12 months beyond the financial statement date is too short and 5 (12 percent) that 12 months is too long.

Those 20 respondents were asked what length of time would be most appropriate to apply to the evaluation of a government's ability to continue as a going concern, and why. Respondents who considered 12 months too short answered with a range of 18 months to 5 years after fiscal year-end, or an average of 2.67 years. Respondents who considered 12 months too long answered with a range of four to six months after fiscal year-end, or an average of 5.5 months. However, half of those 20 respondents who expressed concern over the 12 months seemed to be more concerned about the delay in the issuance of government financial statements. A comment below from a respondent illustrates that view:

> The problem is not the 12 months, but the 200+ days from the end of the government's fiscal year-end by which the average governmental issuer files its financial statements (compared to 30–90 days for corporate issuers). For governments NOT in distress, or even close to it, this is less of a problem, but for those close to, approaching or in distress the long audit . . . delay poses numerous problems for credit analysis of any meaningful practical use. **[Other buy-side]**

Case Study Analyses

One purpose of the review of MD&A and notes of the governments in the case study sample was to identify the first year in which relevant information about the severe financial stress of each government was provided. Statement 34, paragraph 11 (h), requires a discussion in MD&A of currently known facts, decisions, or conditions that are expected to have a significant effect on a government's financial position or results of operations. In addition to the going concern disclosure requirements in Statement 56, other relevant disclosure requirements such as commitments and contingencies, subsequent events, significant violation of finance-related legal or contractual provisions, nonexchange financial guarantees, and so on also may contain relevant information about those governments' impending severe financial stress.

Table 10 below presents, for the governments included in the analysis, the year in which the significant event occurred, the year(s) in which the auditor and the government first indicated financial distress during the period examined, and the period examined. (Table 13 identifies the major contributing factors for the significant events.)

Table 10
Timing of Significant Events, Initial Reporting of Relevant Factors, and Period Examined

Government Name	Type of Event	Event Month/ Year	Year Financial Distress First Reflected in Audit Report (FYE)	Year Financial Distress First Reflected in MD&A or Disclosures (FYE)	Period Analyzed
Vallejo, CA	Bankruptcy	May 2008	June 30, 2007	June 30, 2007	1999-2008
Menasha, WI	Default	September 2009	Not reported	No relevent disclsoure	2000-2009
Prichard, AL	Bankruptcy	October 2009	September 30, 2007[1]	Not disclosed	2007-2010
Warrens, WI	Default	November 2010	Decembe 31, 2007	Decembe 31, 2007	2007-2010
Harrisburg, PA	Receivership	November 2011	December 31, 2008	December 31, 2003 (discloses failure to meet certain covenants)	2003-2011
Jefferson County, AL	Bankruptcy	November 2011	September 30, 2007	September 30, 2007	2002-2011
Central Falls, RI	1. Receivership 2. Bankruptcy	1. May 2010 2. August 2011	June 30, 2010	June 30, 2010	2003-2012
San Bernardino, CA	Bankruptcy	August 2012	June 30, 2011	June 30, 2011	2004-2013
Scranton, PA	Default	June 2012	June 30, 2011	June 30, 2011	2003-2012
Stockton, CA	Bankruptcy	June 2012	June 30, 2011	June 30, 2003[2]	2003-2012
Detroit, MI	Bankruptcy	July 2013	June 30, 2007	June 30, 2004 (MD&A only)	2004-2013
Hillview, KY	Bankruptcy	August 2015	June 30, 2014	June 30, 2012	2007-2016
Dolton, IL	Default	December 2016	None	April 30, 2017	2011-2017
Harvey, IL	Default	June 2017	April 30, 2017	April 30, 2016	2010-2018
Fairfield, AL	Bankruptcy	May 2020	None[3]	September 30, 2017	2014-2018

[1] Prichard, AL received a qualified opinion for failure to obtain an actuarial valuation of its unfunded pension liability. No indications of financial distress are otherwise indicated.

[2] In 1992, Pennsylvania declared the City of Scranton a "distressed municipality." Although the analysis begins in 2003, the disclosure indicating financial distress may have been included since Pennsylvania's declaration in 1992.

[3] The most recent AFR available for Fairfield was for the fiscal year ending September 30, 2018.

In terms of identifying whether and in what year a government's audit report mentioned its financial distress, Table 10 reveals the following:

- For seven governments, the audit report included financial distress language in the year prior to the significant event. In five of the seven audit reports, the

financial distress was in the form of a going concern explanatory paragraph. In two audit reports, the auditor included an emphasis of matter paragraph which indicated financial distress, but not in the form of the standard going concern paragraph.

- For five of the governments, the audit report indicated financial distress at least two years prior to the significant event (between two and six years). One of the five audit reports indicated financial distress by means of a going concern explanatory paragraph. The other four audit reports included emphasis of matter paragraphs to describe a particular issue relevant to financial distress.
- For two of the governments, the audit report did not indicate financial distress prior to the significant event.
- For the remaining government, the AFRs for the two years leading up to the significant event (which was fairly recent) were not yet available.

In terms of identifying the first year when a government disclosed its financial distress in notes to financial statements, Table 10 indicates the following:

- Six governments first reported that they were experiencing financial distress, either in MD&A or disclosures, in the year in which the audit report included an indication of financial distress.
- Two governments made no disclosure that they were experiencing financial distress.
- Seven governments reported in MD&A or note disclosures that they were experiencing financial distress well ahead (between three and nine years before) of the significant event and audit report.

Summary of Findings: Research Question 1

The following highlights summarize the findings related to the first research question regarding whether the current going concern indicators presented in note disclosure guidance are appropriate for state and local governments:

- Similar to the indicators in Statement 56 that a government is required to consider when evaluating whether there is a substantial doubt about its ability to continue as a going concern, guidance included in other standards setters' literature on going concern consideration all provides a range of indicators that include negative trends, indications of possible financial difficulties, internal and external matters, and entities' operational environment.
- The interviews with representatives from state monitoring programs revealed that those programs identify governments experiencing financial stress using a combination of information that is identified in the existing guidance as going concern indicators (though not because of that) and other criteria developed by their programs.

- User survey respondents generally find the disclosures about going concern to be valuable. Twenty-five of 41 respondents (61 percent) who have evaluated a government's AFR that contained a going concern note disclosure considered that information to be valuable.
- A majority of the case study governments disclosed financial stress-related information prior to their significant event, and a majority of the audit reports included a going concern explanatory paragraph prior to the government's significant event.
- A majority of governments examined in one of the Crain Grant-funded studies disclosed information relevant to their GCO in notes to financial statements in the year *prior* to receiving a GCO, and a substantial percentage did so in MD&A.
- The other Crain Grant-funded study found the majority of government dissolutions in the timeframe studied were not *primarily* related to financial stress, though many of the reasons for the dissolutions may reflect financial stress.

Research Question 2: Criteria for Disclosing Severe Financial Stress

Findings included here are intended to answer the second research question: What other criteria might better achieve the objective of disclosing severe financial stress uncertainties with respect to governments.

Literature Review

An extensive body of academic literature exists on fiscal or financial stress in state and local governments. Because *severe financial stress* is not defined in existing GASB literature, a significant focus of this section is what the academic literature says about defining severe financial stress and similar terms (such as financial stress, financial distress, fiscal stress, fiscal distress, and so on) and identifying the causes of severe financial stress. Those issues overlap considerably because severe financial stress often is defined in terms of the factors that cause it. The discussion of the definition and causes of severe financial stress will inform the consideration of criteria for potential disclosure of severe financial stress.

GASB Literature

Concepts Statement No. 1, *Objectives of Financial Reporting*, paragraph 34 states that "financial reports are commonly used to assess a state or local government's **financial condition, that is, its financial position and its ability to continue to provide services and meet its obligations as they come due**." (**Emphasis** added.) That paragraph also states that "assessing an entity's results of operations for current and previous years provides each user group with information that is useful in a variety of ways."

After the issuance of Statement 34 in June 1999, the Board began to explore refining the definition of financial condition as part of its development of Concepts Statement No. 3, *Communication Methods in General Purpose External Financial Reports That Contain Basic Financial Statements*.[7] The then-existing GASB literature employed *financial position* and *financial condition* more or less interchangeably. Using a term from a research report by the NCGA in order to avoid confusion with the existing definition of financial condition, the Board developed a tentative definition of *economic condition* to encompass the multiple facets of financial health and the manner in which they are interrelated. That effort continued during the first phase of a long-term standards-setting project called Economic Condition Reporting (originally, *Financial* Condition Reporting).

The Board first applied its tentative definition of economic condition in the second phase of that project, which culminated in Statement No. 44, *Economic Condition Reporting: The Statistical Section*. Paragraph 5 describes that "the objectives of statistical section information are to provide financial statement users with additional historical perspective, context, and detail to assist in using the information in the financial statements, notes to financial statements, and required supplementary information **to understand and assess a government's economic condition**." (**Emphasis** added.)

Paragraph 50 in the Basis of Conclusions tentatively defined a government's *economic condition* as "a composite of its financial health and its ability and willingness to meet its financial obligations and commitments to provide services." That paragraph also refers to a government's financial position as a component of economic condition, along with its *fiscal capacity* and *service capacity*. The definitions were not fully spelled out in Statement 44; however, the Board relied upon tentative definitions it established early in the project:

> A government's *economic condition* is a composite of its financial health and its ability and willingness to meet its financial obligations and its commitments to provide services. Economic condition includes three components: *financial position, fiscal capacity,* and *service capacity*.
>
> - A government's financial position is the status of its asset, liability, and net asset accounts, as displayed in its basic financial statements.
> - A government's fiscal capacity is its ongoing ability and willingness to raise revenues, incur debt, and meet its financial obligations as they come due.

[7] As noted in paragraph 49 of Concepts Statement 3's Background section, the conceptual framework project was put on hold for approximately 18 months and, when resumed, the Board decided to narrow the scope to the financial reports indicated in its final title.

- A government's service capacity is its ongoing ability and willingness to supply the capital and human resources needed to meet its commitments to provide services.

The Board began the third phase of the Economic Condition Reporting project by examining its tentative definitions of economic condition and its components. The Board made three refinements to the tentative definitions:

a. Economic condition should be viewed as a government's present financial position and its ongoing fiscal and service capabilities.
b. A government's fiscal and service capabilities should be defined at a high level, without alignment to particular types of resources.
c. General purpose external financial reports can be an important source of much information useful in assessing a government's economic condition but are not necessarily a comprehensive source of information for that purpose. That is, financial report users interested also may require or use other sources of information in assessing economic condition.

Based on those tentative decisions, the Board tentatively revised the definitions as follows:

> A government's *economic condition* is a composite of its financial ~~health~~ position and its ability and willingness to continue to meet its financial obligations and service commitments ~~to provide services~~ on an ongoing basis. Economic condition includes three components: *financial position, fiscal capacity,* and *service capacity*.
>
> - A government's financial position is the status of its assets, ~~liability~~ liabilities, and net assets ~~accounts~~, as displayed in its basic financial statements.
> - A government's fiscal capacity is its ~~ongoing~~ ability and willingness to ~~raise revenues, incur debt, and~~ meet its financial obligations as they come due on an ongoing basis.
> - A government's service capacity is its ~~ongoing~~ ability and willingness to ~~supply the capital and human resources needed to~~ meet its commitments to provide services on an ongoing basis.

In November 2011, the Board issued a Preliminary Views (PV), *Economic Conditions Reporting: Financial Projections*. The first four paragraphs of Chapter 2, titled "Defining Economic Condition and Fiscal Sustainability," contain a preliminary view that more succinctly defined economic condition in terms of its components:

4. The earlier phases of the economic condition reporting project discussed in Chapter 1 utilized a tentative definition of economic condition that was developed in the project that led to the issuance of Concepts Statement 3. The tentative definition was subsequently considered in the development

of Statement 44. The Board determined that it is necessary to formally define economic condition in pursuing the project's objective of identifying the information users need to assess a governmental entity's economic condition.

5. **The Board's preliminary view is that the definition of economic condition should be as follows:**

   Economic condition is a composite of a government's financial position, fiscal capacity, and service capacity.

   Financial position is the status of a government's assets, deferred outflows, liabilities, deferred inflows, and net position, as of a point in time.

   Fiscal capacity is the government's ability and willingness to meet its financial obligations as they come due on an ongoing basis.

   Service capacity is the government's ability and willingness to meet its commitments to provide services on an ongoing basis.

6. The definition in the preliminary view clarifies certain notions and terms in Concepts Statement 1. The definition more fully explains what is meant by the term economic condition.

7. The definition of economic condition includes a government's ability, as well as its willingness, to meet financial obligations and service commitments. The distinction between ability and willingness is considered important because a governmental entity may have adequate financial and physical capacity to meet its financial obligations and service commitments, yet be unwilling to do so. Thus, in order to assess economic condition, users need information regarding both ability and willingness.

The Board redeliberated the provisions of the PV in light of stakeholder feedback over the second half of 2012. At that time, the Board decided to suspend further work on the project while the FAF Trustees considered the issue of the GASB's scope of authority. The Economic Condition Reporting project was incorporated into the Going Concern Disclosures pre-agenda research when the Board added that activity to the technical plan in April 2015.

Literature of Other Standards Setters

FASB Standards on risks and uncertainties

The FASB provides guidance that requires entities to disclose information about certain risks and uncertainties that they may face during the course of their operations. ASC Section 275-10-50, *Risks and Uncertainties—Overall—Disclosure*, requires that entities disclose in their financial statements risks and uncertainties surrounding their (1) nature of operations, (2) use of estimates in the preparation of the financial statements, (3) certain significant estimates that were used, and (4) current vulnerability due to certain concentrations. Those risks and uncertainties must exist at the date of the financial statements.

Nature of operations

Entities are required to describe the major products or services that are sold or provided and the principal markets, including the locations of those markets, in which the entities operate. Not-for-profit should describe the principal services performed and the sources of revenue for the services provided.

Use of estimates

Entities should discuss their use of estimates when preparing their financial statements and explain that use of estimates is required in order to prepare financial statements that conform to generally accepted accounting principles.

Certain significant estimates

Entities are required to discuss estimates that were used when preparing the financial statements when (1) it is reasonably possible that those estimates will change in the near-term and (2) those changes will be material. Near-term is defined as a period of time not to exceed one year from the date of the financial statements. Entities also are required to disclose loss contingencies if they are included in those estimates and the possible loss or range of losses that the entities may incur. Listed below are government-relevant examples of estimates that are provided in ASC Section 275-10-50-15, which would require disclosure in an entity's financial statements:

e. Inventory subject to rapid technological obsolescence . . .
h. Environmental remediation-related obligations
Litigation-related obligations
Contingent liabilities for obligations of other entities
Amounts reported for long-term obligations, such as amounts reported for pensions and postemployment benefits . . .
m. Amounts reported for long-term contracts. . .

Current vulnerability due to certain concentrations

Entities are required to disclose certain concentrations that could make them vulnerable to losses. An entity should disclose its concentration risk if the information is known to management at the financial statement issuance date and the following criteria, which are provided in ASC Section 275-10-50-16, are met:

n. The concentration exists at the date of the financial statements
The concentration makes the entity vulnerable to the risk of a near-term severe impact
It is at least reasonably possible that the events that could cause the severe impact will occur in the near-term.

Severe impact is defined in part as, "A significant financially disruptive effect on the normal functioning of an entity."

Once it has been determined that an entity meets the criteria, it should disclose the following concentrations, which are provided in ASC Section 275-10-50-18:

o. Concentrations in the volume of business transacted with a particular customer, supplier, lender, grantor, or contributor . . .
b. Concentrations in revenue from particular products, services, or fund-raising events . . .
Concentrations in the available sources of supply of materials, labor, or services, or of licenses or other rights used in the entity's operations . . .
Concentrations in the market or geographic area in which an entity conducts its operations . . .

PSAB Report on financial condition

The PSAB issues Statements of Recommended Practice (SORPs), which are accounting best practices guidelines that offer general guidance to encourage and assist public sector entities in reporting information that is useful in evaluating the entity's financial condition at the financial statement date and its financial and nonfinancial performance during the reporting period. SORP-4, *Indicators of Financial Condition,* provides guidance to governments that choose to report supplementary information on financial condition. The following is a summary of that guidance.

SORP-4 recommends that when assessing financial condition, a government should consider the elements of *sustainability, flexibility,* and *vulnerability*. Sustainability is the degree to which a government can maintain its existing financial obligations both in respect of its service commitments to the public and financial commitments to creditors, employees, and others without increasing the debt or tax burden relative to the economy within which it operates. Flexibility is the degree to which a government can change its debt or tax burden on the economy within which it operates to meet its

existing financial obligations both in respect of its service commitments to the public and financial commitments to creditors, employees, and others. Vulnerability is the degree to which a government depends on sources of funding outside its control or influence or is exposed to risks that could impair its ability to meet its existing financial obligations, both in respect of its service commitments to the public and financial commitments to creditors, employees, and others.

The report on indicators of financial condition is recommended to include *government-specific* and *government-related* indicators for each of those elements. Government-specific indicators are indicators of a government's finances derived from the government's financial statements. Government-related indicators are indicators of a government's financial condition derived from a combination of information from its financial statements and from the economy in which it operates.

SORP-4 identifies the following indicators that can be used to evaluate a government's sustainability:

- Government-specific indicators
  - Assets-to-liabilities: illustrates the extent to which a government finances its operations by incurring liabilities
  - Financial assets-to-liabilities: reports on the extent to which a government's *financial* assets are financed by incurring liabilities
  - Net debt-to-total annual revenue: provides a measure of the future revenue required to pay for past transactions and events
  - Expense by function-to-total expenses: identifies the major areas of government spending
- Government-related indicators
  - Net debt-to-gross domestic product (GDP) or taxable assessment: shows the relationship between a government's net debt and the activity in the economy
  - Accumulated deficit-to-GDP or taxable assessment: represents the extent to which annual revenues have been insufficient to cover the annual costs of providing services
  - Total expenses-to-GDP or taxable assessment: provides the trend of government spending over time in relation to the growth in the economy.

The following indicators demonstrate the degree of flexibility of a government:

- Government-specific indicators
  - Public debt charges-to-revenues: illustrates the extent to which past borrowing decisions present a constraint on a government's ability to meet its financial and service commitments in the current period

  - Net book value of capital assets-to-cost of capital assets: reports the extent to which the estimated useful lives of a government's tangible capital assets are available to provide its products and services
- Government-related indicators
  - Own-source revenues-to-GDP: shows the extent to which a government is taking income out of the economy in its jurisdiction, either through taxes or user charges
  - Own-source revenues-to-taxable assessment: shows the level at which a government taxing the jurisdiction's real property.

The following indicators illustrate a government's vulnerability:

- Government-specific indicators
  - Government transfers-to-total revenues: shows a government's degree of potential vulnerability due to its dependence on another level of government for revenues
- Government-related indicators
  - Foreign currency debt-to-net debt: illustrates a government's degree of potential vulnerability a government has to currency fluctuations. (government-related)

SORP-4 recommends that a comparison and analysis of actual results and historical trends be conducted and a trend analysis be performed, including at least five years of historical trend data and results from the current reporting period. After the comparison and analysis are completed, an assessment would be done and included in the report. This information would report whether the elements of financial condition improved or worsened over the period analyzed. The following additional information is recommended to be included in the report on financial condition:

- The reasons for changes in each of the elements of financial condition over time
- An analysis of significant events that occurred within a government's economic environment, presented in the context of their impact on financial condition
- Other information useful for understanding financial condition.

Academic Literature

Researchers have used several terms to refer to a government's negative financial condition, including fiscal stress, fiscal distress, and financial stress. Those terms also have varying definitions and descriptions. For example, the Citizens Research Council of Michigan (2000) described the dichotomous nature of financial distress as being either structural or managerial. Structural distress is illustrated by an excess of expenditures over revenues, which can result from: (1) failures in the supply of resources, (2) higher than expected public expenditures, or (3) expenditures that are

higher than the revenues that are used to support them. Managerial distress is the result of unsound management policies or practices or corruption. A recurring theme in the literature is the pairing of strictly financial factors with those that may be described as managerial, institutional, environmental (meaning regulatory, legal, or operating environment), or political. Although some studies focus solely on financial factors, they do so for practical reasons or to emphasize a specific concept, rather than being unaware of the influence of nonfinancial factors.

It should be noted that some researchers have used another term, *financial health*, in their studies to describe a government's financial condition. Financial health and financial stress effectively are two sides of the same coin. Evaluating financial health is the same thing as evaluating financial stress because they are points on the same continuum.

Kloha, Weissert, and Kleine (2005) defined fiscal distress as a "failure to meet standards in the areas of operating position, debt, and community needs and resources over successive years," which can have either or both short-term and long-term implications. The League of California Cities (2016) defined fiscal distress as a situation in which a government has a continuing imbalance between its level of financial commitments and its available resources over time; if the inflows and outflows of resources are imbalanced, financial crisis can result where a government is unable to meet its future obligations. That is another common theme in the literature—distinguishing the effects of economic cycles from a persistent, structural mismatch between resource availability and resource needs.

Rubin (1982) and Pammer (1990) attributed financial stress to four factors: (1) population and job market shifts, (2) governmental growth, (3) interest group demands, and (4) poor management. Population shifts can contribute to financial stress because as a population migrates out of a community, it can lead to an erosion of the tax base, which means less tax revenues received by the government. Job market shifts also can have that effect; if a major employer leaves a community, the population may leave as well in search of employment elsewhere.

One study indicates that migration plays a key role in a city's financial condition. This study observes the interactions between borrowing, migration, and default (Gordon and Guerron-Quintana, 2019). It suggests that cities will over-borrow in the expectation that population growth that will help repay the debt in the future. The study concludes that defaults can occur after "booms" or "busts" in labor productivity and population. The study notes that governmental growth also can lead to stress because as a government grows, so also does its rate of spending. If the revenues received cannot sustain the monies that are spent, stress can result. Demands of special interest groups, which often are the result of political influences, also can lead to an increase in excess spending to appease the needs of the groups. Finally, poor

management can contribute to a government's financial stress. Less competent financial managers, poor accounting and reporting methods, and weak budgeting practices can cause a government to encounter financial stress.

The California Legislative Analyst's Office et al. (2012) identified signs of financial stress for local school districts. Those signs include the following administrative and financial issues that could lead to financial stress:

- Administrative issues
  - Governance crisis
  - Lack of communication with educational community
  - Lack of interagency cooperation
  - Failure to recognize ongoing budget problems
  - Disconnect between personnel data and payroll
  - Limited access to timely personnel, payroll, and budget control data and reports
  - Lack of routine categorical program monitoring
- Financial issues
  - Unsustainable collective bargaining agreements
  - Compensation increases in excess of state funding increases
  - Failure to maintain healthy reserves
  - Flawed multiyear projections
  - Flawed average daily attendance projections
  - Inaccurate revenue and expenditure estimates
  - Poor cash flow analysis and reconciliation
  - Categorical program increases in excess of categorical funding increases

Models of Financial Stress Analysis and Financial Indicators

The academic literature contains many models of financial stress criteria for analysis of local governments. Those models reflect the major themes discussed thus far in the approaches to defining severe financial stress. The following sections describe several of those models and the financial indicators used in each model.

International City/County Management Association

The International City/County Management Association's (ICMA) manual, *Evaluating Financial Condition: A Handbook for Local Government* describes the Financial Trend Monitoring System (FTMS), a tool that is both quantitative and qualitative and helps governments to evaluate and analyze their financial health (Nollenberger, Groves, and Valente, 2003). The ICMA's basic approach to analyzing the financial health of a government focuses on 12 factors—6 *financial factors* that are the results of how 5 *environmental factors* are responded to by *organizational factors*. (See Table 11.)

Table 11
ICMA's Governments' Financial Health Factors

Financial Factors	Environmental Factors
• Revenues • Expenditures • Operating position • Debt structure • Unfunded liabilities • Condition of capital plant	• Community needs and resources • Intergovernmental constraints • Disaster risk • Political culture • External economic conditions

The twelfth factor, organizational forces, represents both the internal workings of a government and legislative bodies that can directly influence or affect the government. The organizational forces are "management practices and legislative policies."

The ICMA describes 42 indicators that can be used to measure the financial factors and some environmental factors, including warning trends for each indicator that signal deterioration in financial condition. The manual notes the indicators were selected from an initial group of more than 100 indicators. Indicators were eliminated if the indicator required data that was not reasonably available to the average small-to-medium-sized local government, required techniques beyond the capabilities of the staff of such governments, or did not provide useful information to practitioners. It is worth noting that although the construction of the ICMA's model was based on solid academic foundations, by eliminating the above-mentioned indicators, the model was purposefully tempered to be a practical tool suitable for a wider range of governments.

The manual does not provide indicators for the environmental factors of *political culture* and *external economic conditions*. Instead, the manual provides evaluation questions to clarify the impact of those factors. The quantitative indicators for other factors, along with the related warning trends, are summarized in Table 12.

A noticeable shortcoming of the ICMA model is that it focuses solely on fund-level (primarily governmental fund) information. Despite having been updated several years after the issuance of Statement 34, it does not incorporate any of the accrual information for governmental activities that governments were then reporting for the first time.

One description of the ICMA framework suggests that governments choose the metrics that they deem important and then track the information over time in order to determine the status of their financial condition (Gorina, Maher, and Joffee, 2017). They note that a downside to this approach is that there is no benchmarking relative to other entities, resulting in a lack of consistency in the use of those metrics across communities.

Table 12
ICMA Financial and Environmental Indicators and Warning Trends

Financial Indicators	
Revenue Indicators	**Warning Trend**
Revenue per capita	Decreasing
Restricted revenues as a percentage of net operating revenues	Increasing
Intergovernmental revenues as a percentage of gross operating revenues	Increasing
Elastic operating revenues as a percentage of net operating revenues	Decreasing
One-time operating revenues as a percentage of net operating revenues	Increasing
Tax revenues (constant dollars)	Declining
Uncollected property taxes as a percentage of net property tax levy	Increasing
Revenues from fees and user charges as a percentage of total expenditures for related services	Decreasing
Revenue shortfalls or surpluses as a percentage of actual net operating revenues	Increasing
Expenditure Indicators	**Warning Trend**
Net operating expenditures per capita	Increasing
Operating expenditures for one function as a percentage of total net operating expenditures	Increasing
Municipal employees per capita	Increasing
Fixed costs as a percentage of net operating expenditures	Increasing
Fringe benefit expenditures as a percentage of salaries and wages	Increasing
Operating Indicators	**Warning Trend**
General fund operating deficit or surplus as a percentage of net operating revenues	Increasing
Enterprise operating position	Reductions in working capital or recurring operating income losses
Unreserved[8] fund balances as a percentage of net operating revenues	Declining
Cash and short-term investments as a percentage of current liabilities	Decreasing
Debt Indicators	**Warning Trend**
Current liabilities as a percentage of net operating revenues	Increasing
Net direct bonded long-term debt as a percentage of assessed valuation, population, or personal income	Increasing

[8] The development of the manual preceded the issuance of Statement 54.

Net direct debt service as a percentage of net operating revenues	Increasing
Long-term overlapping debt as a percentage of assessed valuation	Increasing
Unfunded Liability Indicators	**Warning Trend**
Pension obligations as a percentage of salaries and wages	Increasing
Pension plan assets as a percentage of benefits paid	Decreasing
Postemployment benefits liability per municipal employee	Increasing
Capital Plant Indicators	**Warning Trend**
Maintenance expenditures per unit of asset	Declining
Capital outlay as a percentage of net operating expenditures	Decline for 3+ years
Environmental Indicators	
Community Needs and Resources Indicators	**Warning Trend**
Population	Rapid change
Population density	Decreasing
Percentages of population under 18 and over 64	Increasing
Personal income per capita (constant dollars)	Decline in level or growth rate
Poverty households or public assistance recipients per thousand households	Increasing
Percentage change in property value	Declining growth or drop in market value of property
Valuation percentage held by top five taxpayers	High (over 20%) or increasing
Home ownership rate	Decreasing
Vacancy rates	Increasing
Crime rate	Increasing
Local unemployment rate and/or number of jobs in the community	Increasing local unemployment rate or decline in the number of jobs within the community
Business activity as measured by retail sales, number of business units, or gross business receipts	Decline
Intergovernmental Constraints Indicators	**Warning Trend**
Expenditures for mandated activities as a percentage of net operating expenditures	Increasing
Restrictions on fiscal powers (answers to 6 yes-or-no questions are scored 0 or 10 based on the responses; the combined score indicates the level of local control)	High (overall score of 40 to 60)
Disaster Risk Indicator	**Warning Trend**
Disaster risk	Increasing

Ken Brown's 10-point test

Believing the ICMA's system might be too cumbersome, especially for smaller cities, Ken Brown (1993) proposed a 10-indicator test that governments with populations of less than 100,000 could use to assess their financial condition. The "10-point test" is composed of 10 key ratios of financial condition and a scoring procedure that governments can use to compare its results with those of other governments.

The 10 key ratios are as follows:

1. Total revenues (all governmental funds) ÷ population
2. Total general fund revenues from own sources ÷ total general fund revenues
3. General fund sources from other funds ÷ total general fund sources
4. Operating expenditures (total expenditures for general, special revenues, and debt service funds) ÷ total expenditures (all governmental funds)
5. Total revenues (all governmental funds) ÷ total expenditures (all governmental funds)
6. Unreserved[9] general fund balance ÷ total general fund revenues
7. Total general fund cash and investments ÷ total general fund liabilities
8. Total general fund liabilities ÷ total general fund revenues
9. Direct long-term debt ÷ population
10. Debt service ÷ total revenues (all governmental funds).

Brown suggested that the 10 ratio measures be equally weighted and aggregated to provide an overall composite indication of a government's financial condition. A government is scored based on the strength of its indicators relative to a group of peer governments, from –1 (fourth quartile) to +2 (first quartile). Indicators for peer governments could be obtained from the Government Finance Officers Association's (GFOA) Financial Indicators Database. If a government's overall score was 10 or higher, it was considered among the best compared with other cities ranked in the database. If a government's overall score was -5 or less, it was considered among the worst of the ranked cities.

Brown's test of financial condition was perceived positively because it attempted to provide an overall assessment of a local government's financial condition in a simple manner and generally was based on data that was readily available. However, the proposal came under scrutiny for the following reasons (The Civic Federation, 2015):

- The test rewarded or punished governments on a relative rather than absolute basis for the individual indicators. For example, even if all governments in the test had large unreserved general fund surpluses, those with the smallest surpluses would still be penalized.

[9] The development of the test preceded the issuance of Statement 54.

- There were no explicit year-to-year implications reflected in the measures; rather, each government was evaluated solely on measures reported in a single year.
- The test did not include any social or economic measures.
- Three of the indicators—per capita revenues, per capita direct long-term debt, and general fund revenues from own sources as a percentage of total general fund revenues—were considered not to be suitable indicators of fiscal distress.

Although Brown's 10-point test was considered useful in its simplicity and accessibility, another limitation is that the data focused exclusively on the funds and not the overall government because it predated Statement 34.

Updates to Brown's 10-point test

The simplicity of Brown's 10-point test makes it a useful tool for local governments, especially smaller entities with few financial resources or accounting staff. Unfortunately, Brown either used proxies or included no indicators at all to address long-run financial issues. As a result, the test is skewed toward the short-run and largely ignores long-run concerns that have a significant impact on financial health (Maher and Nollenberger, 2009).

A chapter in *Handbook of Public Financial Management* (Mead, 2006) updates the 10-point test to encompass a long-run, government-wide perspective. Two of Brown's "operating position" ratios were retained—unreserved[10] general fund balance divided by general fund revenues, and general fund cash and investments divided by general fund liabilities (though the latter was revised to remove deferred revenues). However, Brown's ratio of modified accrual revenues to expenditures was replaced with an accrual-based ratio of change in governmental activities net assets divided by total governmental activities net assets.

Brown's three "revenues" ratios—per capita revenues, general fund revenues from own sources as a percentage of total general fund sources, and general fund sources from other funds as a percentage of total general fund sources—were replaced with a ratio of intergovernmental aid divided by total revenues for the primary government and a ratio of self-sufficiency: net (expense) revenue for governmental activities divided by total governmental activities expenses.

Brown's ratio of per capita direct long-term debt was replaced with a more comprehensive measure of total outstanding debt for the primary government per capita. His other "debt structure" ratios—debt service divided by total revenues, and total general fund liabilities divided by total general fund revenues—were retained but revised. In the former, noncapital governmental funds expenditures were used in the

[10] The chapter was written prior to the issuance of Statement 54 and the shift from net assets to net position in Statement 63.

denominator instead of revenues; the latter became a government-wide ratio of primary government liabilities (less deferred revenue) divided by primary government revenues. A fourth ratio was added to capture the ability to repay enterprise fund-related debt—enterprise funds operating revenue plus interest expense, divided by interest expense.

Finally, Brown's "expenditures" measure of operating expenditures divided by total expenditures, which purported to indicate whether infrastructure was being properly maintained, was highly problematic and less useful than some of the new capital asset information resulting from Statement 34. Consequently, it was replaced with a ratio of percentage change in net value of capital assets.

The following are the 10 ratios from the updated 10-point test:

1. Short-run financial position: Unreserved general fund balance ÷ general fund revenues
2. Liquidity: General fund cash and investments ÷ (general fund liabilities – general fund deferred revenues)
3. Financial performance: Change in governmental activities net assets ÷ total governmental activities net assets
4. Solvency: (Primary government liabilities – deferred revenues) ÷ primary government revenues
5. Revenues (A): (Primary government operating grants and contributions + unrestricted aid) ÷ total primary government revenues
6. Revenues (B): (Net (expense) revenue for governmental activities ÷ total governmental activities expenses) × –1
7. Debt Burden: Total outstanding debt for the primary government ÷ population
8. Coverage (A): Debt service ÷ noncapital governmental funds expenditures
9. Coverage (B): (Enterprise funds operating revenue + interest expense) ÷ interest expense
10. Capital Asset Condition: (Ending net value of primary government capital assets – beginning net value) ÷ beginning net value.

Maher and Nollenberger (2009) also provided an update to Brown's 10-point test by incorporating indicators that measure a government's cash solvency, budgetary solvency, and long-run solvency. Building upon Brown's studies, Maher and Nollenberger provided 10 key indicators of financial condition that were used for the time period of 2003–2006 to assess governments in the GFOA's Indicators database. The indicators are the following:

1. Revenue indicator: Total revenues for all governmental funds (excluding capital project funds) ÷ population
2. Revenue indicator: Intergovernmental revenues for the general fund ÷ total general fund revenues

3. Revenue indicator: Total tax revenues levied locally for the general fund ÷ total general fund Revenues
4. Expenditure Indicator: Total expenditures for all governmental funds (excluding capital project funds) ÷ population
5. Operating position indicator: General fund operating surplus (deficit) ÷ total general fund revenues
6. Operating position indicator: General fund unreserved fund balance ÷ total general fund revenues
7. Operating position indicator: Current assets of enterprise funds ÷ current liabilities of enterprise funds
8. Debt indicator: Long-term general obligation (GO) debt ÷ assessed value
9. Debt indicator: GO debt service ÷ total general fund revenues
10. Unfunded liability indicator: Funded ratio (in other words, actuarial value of plan assets ÷ actuarial accrued liability).

Other models incorporating Statement 34 information

In addition to the updates of Brown, other models for predicting or measuring financial stress have incorporated the government-wide financial statements accrual information that was first required by Statement 34. Several of those studies are discussed throughout this paper, including Wang, Tu, and Dennis (2007) and Arnett (2014).

The National Center for Education Statistics published an article outlining an approach to assessing school district financial condition. (Mead, 2001a) The approach built on the financial analysis discussion in the GASB's User Guide Series (Mead, 2001b), suggesting 37 ratios in seven categories:

- Common size ratios—percentage distribution and change
- Financial position ratios, such as net assets[11] divided by total expenses and change in net assets divided by total expenses
- Liquidity ratios, including current and quick ratios
- Solvency ratios, including leverage ratios (such as debt-to-assets) and coverage ratios
- Fiscal capacity ratios, such as debt or taxes divided by property value, personal income, and population
- Risk and exposure ratios, such as expenditures divided by property tax revenues
- Miscellaneous other ratios, including the pension funding ratio, unfunded pension liability divided by property value, employees per pupil, maintenance and

[11] This article, Chaney et al., and Crawford & Associates predate the issuance of Statement 63.

repair expenses divided by capital assets, and accumulated depreciation divided by capital assets.

Chaney, Mead, and Schermann (2002) proposed a smaller set of potential new ratios. The purpose of the article was to spur the discussion of how to use Statement 34 information to assess financial condition. The article suggested six ratios and calculated them using two early implementers of the new reporting model. Each of the ratios was calculated separately for governmental activities and BTAs, as well as for the total primary government:

- Financial position—unrestricted net assets divided by expenses
- Financial performance—change in net assets divided by total net assets
- Financial performance—general revenues plus transfers divided by expenses
- Liquidity—cash, current investments, and receivables divided by current liabilities
- Solvency—long-term debt divided by assets
- Solvency—change in net assets plus interest expense divided by interest expense.

The accounting firm of Crawford & Associates, P.C., developed an indicator system that was founded on post-Statement 34 financial reporting. The Crawford Government Finance Performeter™ was an overall "reading" or number on a scale of 1–10 (10 being "excellent financial health"). The overall reading was based on the calculation and evaluation of measures in the following categories—change in overall financial condition, intergenerational equity, level of reserves or deficit, revenue dispersion, self-sufficiency, capital asset condition, financing margin, debt load, solvency, and liquidity.

Many of those measures use government-wide accrual information. For example, change in overall financial condition is the percentage change in primary government net assets. Debt load is calculated as debt service as a percentage of expenditures for both governmental activities and BTAs. Level of reserves employs unrestricted net assets in its calculation. Capital asset condition, which measures the extent to which capital assets are reaching the end of their useful lives, divides accumulated depreciation by historical cost. One of the solvency ratios is net assets as a percentage of total assets.

Fuzzy rule-based system

Shi (2020) described the term "fuzzy" as the development of robust measures of inputs that are less sensitive to measurement error. Shi further described "rule-based" systems as a method for combining individual inputs into an evaluation that reflects the contextual judgement of the evaluators. The "fuzzy rule-based system" (FRBS) can provide governments with a detailed evaluation of its performance with respect to each dimension of financial condition that can be partially categorized into poor, fair, and good. The variables in the fuzzy set are not stated as true or false (as in conventional

variables) but instead stated as true to a certain degree or false to a certain degree. Shi states that FRBS is well suited for decomposing complex situations and combining multiple measures into an overall evaluation.

Shi's study applies the FRBS to all 50 states in order to evaluate their short-run and long-run financial condition after the Great Recession of 2008. Shi's analysis utilized separate measures for each of four dimensions of financial condition (cash solvency, budgetary solvency, long-run solvency, and service solvency). The measures utilized are calculated at the government-wide level as follows:

- Cash Solvency
  - Cash ratio: Cash, cash equivalents, and investments ÷ current liabilities
  - Quick ratio: Cash, cash equivalents, investments, and receivables ÷ current liabilities
  - Current ratio: Current assets ÷ current liabilities
- Budget Solvency
  - Surplus (deficit) per capita: Changes in net assets ÷ population
  - Operating position: Total revenue ÷ expenses
- Long-term Solvency
  - Financial position: Unrestricted net assets ÷ expenses
  - Debt to asset ratio: Total outstanding long-term debt ÷ assets
  - The net investment in capital assets: The amount of the net investment in capital assets (in dollars)
- Service Solvency
  - Self-sufficiency ratio: Program revenues ÷ expenses
  - Expense per capita: Total expenses ÷ population.

Shi's intent was for the FRBS to be used by policy makers to identify whether their state is facing potential short-term and long-term financial problems. Shi stresses that this method is not the conventional regression analysis, but instead provides researchers a middle path to assist with public administration and management.

Other models

Kleine, Kloha, and Weissert (2003) developed a 10-point scale to predict fiscal distress. The scale was a composite of nine variables upon which a performance standard was established based on the distribution of a sample of Michigan local governments. The variables were as follows:

1. Population growth (2 years)
2. Real taxable value growth (2 years)
3. Large decrease in real taxable value (2 years)
4. General fund expenditures as a percentage of taxable value
5. General fund operating deficit

6. Prior general fund operating deficits
7. General fund balance as a percentage of general fund revenues
8. Current or previous year deficit in a major fund
9. General long-term debt as a percentage of real taxable value.

The scale was applied to a sample of 150 local governments in Michigan over an 11-year period from 1991 to 2001. Using a scoring system of 0 to 10, the governments that received a score of 10 were said to be experiencing severe fiscal distress and those governments that received a score of 0 were said to be experiencing little or no distress. The study developed the following categories:

- Governments scoring 0–4 were considered fiscally healthy.
- Governments scoring 5 should be put on fiscal watch.
- Governments scoring 6 or 7 are subject to a fiscal warning
- Governments scoring 8–10 points are facing a fiscal emergency on the horizon or imminently.

The authors found the scale to be useful in identifying the governments that the state of Michigan classified as severely distressed.

Trussel and Patrick (2009) developed a predictive model to identify fiscal distress in local governments and tested it using data for local governments in Pennsylvania. Trussel and Patrick classified local governments as either fiscally distressed or not fiscally distressed. They defined fiscally distressed as a significant and persistent imbalance between revenues and expenditures. To operationalize the definition, they used two quantitative criteria: (1) the government must have three consecutive years of operating deficits (expenses exceed revenues) and (2) the government must have experienced a cumulative operating deficit of more than 5 percent during the three-year period.

Trussel and Patrick considered many of the indicators described above and in other studies. Some indicators, including the unfunded liability and capital plant indicators from the ICMA model, were not included as the database used by Trussel and Patrick did not include that information. They limited their risk factors to four categories: revenue concentration, administrative expenditures, debt usage, and entity resources.

Trussel and Patrick evaluated indicators in each of the four categories by testing the correlation of each indicator to the classification of the government as fiscally distressed or not fiscally distressed. They found that their model correctly identified 91 percent of their sample governments as either fiscally distressed or not fiscally distressed.

Trussel and Patrick found that four indicators were significantly related to the probability of distress, whereas three indicators were not. The four indicators

(determined at the government-wide level unless otherwise indicated) that were related to the probability of distress were:

- Intergovernmental revenues: Revenue from federal and state ÷ total revenues
- Administrative cost ratio: Administrative expenditures (includes all general purpose expenditures from the general fund) ÷ total expenditures
- Debt level: Total liabilities
- Revenue growth: Percentage change in total revenues.

The three indicators that were not statistically relevant were tax revenues divided by total revenues, total liabilities divided by total revenues, and total revenues.

The model indicates that as intergovernmental revenues increase as a share of total revenues, so does the risk of fiscal distress. They noted that this may be caused by over-reliance on funding streams outside the control of the government, which may worsen as the government seeks to replace funding that has ceased. The model also shows that governments with higher revenue growth are less likely to develop fiscal distress.

The model indicates that the risk of fiscal distress decreases as administrative expenditures increase as a percentage of total expenditure. Having a higher administrative cost ratio in turn means there are lower program and debt service expenses. Trussel and Patrick hypothesized that the cause of higher program costs is that local governments often are required to provide services mandated by federal and state governments and those mandates place a burden on local governments for more program costs. Additionally, the model shows that as the use of debt increases, so does the risk of fiscal distress.

Hendrick (2004) discusses three dimensions of fiscal health in municipal governments: (1) properties of the government's environment, (2) balance of the fiscal structure with the environment, and (3) properties of the government's fiscal structure. The first dimension is composed of revenue wealth, spending needs, and socioeconomic, political, and demographic features. The third dimension reflects the outcomes of officials' and other direct participants' financial choices and consists of fiscal slack, relativity of components within major structural areas (such as relative levels of revenue sources, spending functions, debt instruments, or other areas of financial activity), current operating conditions, future financial obligations, and the changes in those items. Dimension (2) is a comparison of the components of dimensions (1) and (3).

Using a framework to assess financial condition, Hendrick developed three indices—environmental, fiscal balance, and fiscal structure— to encompass spending needs, revenue wealth, balance with the environment, and fiscal slack, and applied them to 264 suburban municipalities near Chicago:

- Environmental indicators:
  - Revenue wealth:
    - Income per capita
    - Equalized assessed value per square mile
    - Weighted sales receipts per capita
  - Spending needs:
    - Median age of housing
    - Weighted crime rate per capita
    - Population density (population ÷ square miles)
    - Whether a municipality is in a fire district
- Fiscal balance indicators:
  - Weighted own-source revenues per capita
  - Weighted expenditures per capita (reflects the extent to which a government is able to provide an appropriate level of service)
- Fiscal structure:
  - Unreserved[12] fund balance ÷ total fund balance
  - Capital expenditures ÷ total expenditures
  - Enterprise income ÷ (enterprise income + own-source revenues)
  - Debt service ÷ total expenditures.

Hendrick noted that the relationships between dimensions are complex and indirect in nature, making it difficult to construct a single, comprehensive indicator of fiscal health or fiscal condition. The research presented by Hendrick did not offer a complete set of measures of fiscal health but points out that indicators should be linked to outcomes in a manner that is useful to policy makers and financial stakeholders evaluating the fiscal health of governments.

Financial Stress in Certain Types of Governments

The models described above focus primarily on financial stress of local governments. The following section describes literature that focuses on other types of governments, including special districts, states, rural governments, and colleges and universities.

Special districts

Trussel and Patrick (2013a) developed a model to predict fiscal distress in special-purpose districts.[13] They identified four symptoms of fiscal distress—revenue concentration, organizational slack, debt usage, and entity resources—and used financial indicators as proxies for each symptom.

[12] The study preceded the issuance of Statement 54.
[13] As with the COG, *special districts* in this study included both BTAs and taxing districts.

Trussel and Patrick noted that districts with a variety of revenue sources will have greater ability to issue debt and be less susceptible to fiscal distress; therefore, they expected a positive association between revenue concentration and fiscal distress. Two measures of revenue concentration were used in the model: (1) diversity in funding and (2) the relationship of intergovernmental revenues to own-source revenues (own-source revenues are revenues derived from the district's own taxes and fees). Diversity in funding is measured as the sum of the squared ratios of each revenue source to own-source revenue. Revenues from other governmental sources to own-source revenues is the percentage that own-source revenues must be increased for every percentage decrease in intergovernmental revenues.

Trussel and Patrick describe organizational slack as the measure of a special-purpose district's discretionary spending. Districts with higher levels of slack built into their budgets are less susceptible to fiscal distress, whereas those with lower levels of slack are more vulnerable. Districts that are experiencing fiscal distress defer capital improvements and expenditures, which results in deteriorating infrastructure. Organizational slack is measured as the ratio of capital expenditures divided total revenues and bond proceeds.

Trussel and Patrick measure debt usage with two ratios:

- Debt-to-cash ratio (short-term solvency), which is total liabilities divided by total cash
- Debt-to-revenue (long-term solvency), which is total liabilities divided by total revenues, and measures the number of years of revenue it will take to repay the debt incurred.

Trussel and Patrick posit that entity resources are a contra-indicator of fiscal distress and are reflected in a district's population and tax base thus, large municipalities are less susceptible to fiscal distress. To proxy the *size* of the district, Trussel and Patrick use the natural log of total revenues. Once the *size* of the district was estimated, Trussel and Patrick could measure their financial indicator for entity resources of that district.

To test those indicators, Trussel and Patrick drew a sample from 81,974 special districts from a U.S. Census Bureau database, for the years 1995–2008. The final sample consisted of 21,574 district-years. Using regression analysis of the indicators of fiscal distress, Trussel and Patrick observed that districts that are fiscally distressed have more diverse revenue sources (fewer sources of revenue bring more stability, as the government does not have to rely on drawing upon more diverse funding), lower capital expenditures, higher debt usage, and are larger in size than nondistressed districts.

The results of the analysis also suggested that the most important indicator of fiscal distress is a low level of capital expenditures relative to total revenues and bond proceeds. The fiscal distress model correctly classified over 93 percent of the districts

sampled, identified a set of indicators associated with fiscal distress, and predicted fiscal distress in districts. Trussel and Patrick concluded that their model identifies a set of indicators associated with fiscal distress and can predict fiscal distress in any district regardless of its enabling legislation, function, or financing structure.

State governments

Some researchers have examined the financial condition of states, including several studies that rank states by financial condition. Wang, Dennis, and Tu (2007) developed a multiple regression model to measure financial condition using government-wide financial information. They used the model to rank U.S. states according to how well or poorly the states were performing fiscally.

The model included four dimensions of solvency and 11 financial indicators (with equal weights) to develop a composite index. The four dimensions were as follows:

- Cash solvency: demonstrated by an organization's ability to generate sufficient financial resources to pay its current liabilities
- Budgetary solvency: demonstrated by an organization's ability to generate sufficient revenues to fund its current or desired level of services
- Long-run solvency: the impact of existing long-term obligations on future resources
- Service-level solvency: an organization's ability to provide and sustain a service level that citizens require and desire.

Using the dimensions of solvency, the authors developed 11 indicators incorporating concepts from Statement 34:

- Cash solvency
  - Cash ratio: (cash + cash equivalents + investments) ÷ current liabilities
  - Quick ratio: (cash + cash equivalents+ investments + receivables) ÷ current liabilities
  - Current ratio: current assets ÷ current liabilities
- Budgetary solvency
  - Operating ratio: total revenues ÷ total expenses
  - Surplus (deficit) per capita: total surpluses (deficits) ÷ population
- Long-run solvency
  - Net asset[14] ratio: restricted and unrestricted net assets ÷ total assets
  - Long-term liability ratio: long-term (non-current) liabilities ÷ total assets
  - Long-term liability per capita: long-term (non-current) liabilities ÷ population

[14] The study predates the issuance of Statement 63.

- Service-level Solvency
  - Taxes per capita: total taxes ÷ population
  - Revenue per capita: total revenues ÷ population
  - Expenses per capita: total expenses ÷ population

The findings from the study showed that the model is reliable and valid in measuring financial condition and that government-wide financial information required by Statement 34 provides a useful foundation that can be used to analyze a government's financial condition.

Arnett (2014) subsequently used the model to rank the states' fiscal condition using 2012 data. Arnett weighted the four solvency indices to create a fiscal condition index that was used in the ranking; the composite score developed by Wang et al. used an average of the 11 financial indicators, giving each indicator equal weight. Arnett asserted that method does not account for the different time frame of the indicators (for example, cash solvency has a short time frame of 30-60 days, while budget solvency has a slightly longer time frame like the course of a fiscal year) or the imprecision of the indicators due to future unknowns (such is how governments will act in the future) in the long-run and service-level solvency indices. Arnett applied greater weight to the cash solvency and budget solvency indices (0.35 each) and lower weight to the long-run solvency (0.20) and service-level solvency (0.10) indices.

The ranking of the states using Arnett's composite index showed a substantial difference between the top performers and the bottom performers when taking into account all four dimensions. Specifically, those related to cash, budget, and long-run solvency had the most significant differences between the top and bottom performers. The states at the bottom of the ranking shared common characteristics of poor financial management decisions, bad economic conditions, or both, as well as underfunded pension systems.

Rural governments

The Census Bureau defines *rural* as any population, housing, or territory that is not in a region surrounding a city (urban area). Honadle and Lloyd-Jones (1998) performed an exploratory case study of rural Swift County, Minnesota in response to a request by the commissioners of the County to help analyze the County's fiscal health and make recommendations that would help improve the county's finances. After researching various fiscal health analytical tools and consulting with economists, Honadle and Lloyd-Jones concluded that some of the indicator models are not applicable to a rural government. As a result, Honadle and Lloyd-Jones decided to conduct the analysis using Brown's 10-point test, Alter's 10-year trends (Alter, McLaughlin, and Melniker, 1986), and ICMA's Financial Trend Monitoring System. Using the three models, Honadle and Lloyd-Jones concluded that the financial condition of the County was

basically sound, but the results revealed warning signs that the fiscal health of the County may be at risk.

Honadle and Lloyd-Jones compared the three models. They noted that of the three, Brown's was the easiest to use and provided the most immediately useful information. The simplicity of the test was both a benefit and shortcoming; a benefit in that the test is relatively simple to use, a shortcoming in that the results of the test may be oversimplified. They concluded that Alter's test was difficult to use because it required disaggregated information to identify potential factors that may be affecting a category. The information provided by the County was highly aggregated, which prevented the test from being able to pinpoint trends.

Finally, they deemed the ICMA System to be the most difficult of the three, due in large part to their inability to calculate certain ratios. For example, one useful indicator that they were unable to calculate was user charge coverage, which would show if the user charges were covering the cost of services they are paying for, because the costs of providing the services were buried in other accounts. However, Honadle and Lloyd-Jones did find the indicators that they were able to calculate useful and telling. They found that when ICMA was used in conjunction with Brown, it highlighted issues and emerging problems that Brown's test subsequently confirmed. Honadle and Lloyd-Jones interpreted that as confirming that the results were accurate.

Honadle and Lloyd-Jones concluded that methodology tools such as the three used can be instrumental in analyzing and monitoring the financial condition of rural local governments.

Colleges and universities

Several studies have focused on measuring the financial condition of colleges and universities. Lyken-Segosebe and Shepherd (2013) identified several bodies of research that provide potential risk factors that can be used to assess the financial health of an institution of higher education (though their focus was on private institutions). Martin and Samels (2009) provided 20 indicators that may indicate stress:

- Tuition discount is more than 35 percent
- Tuition dependency is more than 85 percent
- Debt service is more than 10 percent of the annual operating budget
- The ratio between the endowment and operating budget is less than 1-to-3
- Student default rate is above 5 percent
- Average tuition increase is greater than 6 percent for 5 years
- Deferred maintenance is at least 40 percent unfinanced
- Short-term bridge financing is required in the final quarter of each fiscal year
- Less than 10 percent of the operating budget is dedicated to technology

- Average annual alumni gift is less than $75 and fewer than 30 percent of alumni give annually
- Institutional enrollment is 1,000 students or lower
- Conversion yield—the percentage of students who attend the college after applying—is 20 percent behind that of primary competitors
- Student retention is more than 10 percent behind that of primary competitors
- The institution is on probation, warning, or financial watch with a regional accreditor or a specialty degree licensor
- The majority of faculty do not hold terminal degrees
- Average age of full-time faculty is 58 or higher
- The leadership team averages fewer than 3 years or more than 12 years of service at the institution
- No complete online program has been developed
- No new degree or certificate program has been developed for at least two years
- It takes more than a year to approve a new degree program.

Other factors include a decline in bond ratings, an increase in tuition prices to offset changes in enrollment, lowered admission standards, and a reduction in faculty (Denneen and Dretler, 2012).

Originally published in the 1970s as Ratio Analysis in Higher Education by KPMG (then Peat, Marwick, Mitchell & Co.), *Strategic Financial Analysis for Higher Education* has been revised periodically since, in conjunction with Prager, Sealy & Co., and BearingPoint, Inc. The sixth edition of the book, published in 2005, added a number of new ratios for public institutions and introduced a "composite financial index" (CFI) measure. Significantly, that edition also combined the previously separate ratios and analytical models for public and private institutions in recognition that "recent changes in the financial accounting and reporting model for public institutions have made the financial statements more similar to their private counterparts." The book also emphasized the increasing competition between private and public institutions and their belief that the industry should be viewed as a whole (not separate private and public sectors) as additional rationales for the combination.

The book sets forth ratios for assessing four factors relevant to the overall financial health of a college or university—resource sufficiency and flexibility, management of resources including debt, asset performance and management, and operating results:

- Resource sufficiency and flexibility
    - Primary reserve ratio—expendable net assets (assets that can readily be accessed and spent to satisfy debts) divided by total expenses
    - Secondary reserve ratio—nonexpendable (permanently restricted) net assets divided by total expenses

  - Capitalization ratio—net assets divided by total assets, but with certain modifications, such as the elimination of non-income-producing intangible assets and receivables from component units
- Management of resources
  - Viability ratio—expendable net assets divided by long-term "project-related" debt
  - Debt burden ratio—debt service divided by expenses (with certain adjustments, such as the removal of depreciation expense)
  - Debt service coverage ratio—excess of income over adjusted expenses divided by debt service
  - Leverage ratio—(total net assets minus nonexpendable net assets) divided by long-term project-related debt
  - Short-term leverage ratio—debt for purposes other than acquiring long-term assets [non-project-related] divided by (cash + cash equivalents + short-term investments)
- Asset performance and management
  - Return on net assets ratio—change in net assets divided by total net assets
  - Financial net assets ratio—(total net assets minus net assets invested in capital assets net of related debt) divided by total net assets
  - Physical net assets ratio—net assets invested in capital assets net of related debt[15] divided by total net assets
  - Physical asset reinvestment ratio—(capital expenditures plus capital asset gifts) divided by depreciation expense
  - Age of facilities ratio—accumulated depreciation divided by depreciation expense
  - Facilities burden ratio—(depreciation, interest, and plant operations and maintenance expenses) divided by capital assets, net
  - Facilities maintenance ratio—plant operations and maintenance expenses divided by total revenues
  - Deferred maintenance ratio—outstanding maintenance requirements divided by expendable net assets.
- Operating results
  - Net operating revenues ratio—(operating income (loss) plus net nonoperating revenues) divided by (operating revenues plus nonoperating revenues)
  - Cash income ratio—(cash flow from operations plus cash from government appropriations and cash from gifts and grants for operating purposes) divided by (operating revenues plus government appropriation revenues plus gift and grant revenue for operating purposes plus interest and dividend income)

[15] The book predates the issuance of Statement 63.

- Contribution ratios—individual ratios similar to percentage distributions calculated by dividing major revenues sources (tuition and fees, grants and contracts, government appropriations, and so on) by total expenses
- Demand ratios—similar to contribution ratios, but major expense categories divided by total operating income.

The CFI is a composite of four core ratios (one from each of the four factors)—primary reserve ratio, viability ratio, return on net assets ratio, and net operating revenues ratio, respectively. The purpose is to create a performance measure that rates the relative financial health of an institution, though the book considered it to be limited as a peer-group comparative measure.

Interviews of State Monitoring Programs

The following responses describes interviewees' views regarding (1) other factors that indicate severe financial stress that are not included in existing GASB guidance on going concern considerations and (2) the effectiveness of the state monitoring programs.

Other Factors That Indicate Financial Stress

When interviewees were asked to identify the specific ratios or indicators they believed were the best predictors of financial stress, two interviewees identified indicators that are not financial in nature and not included existing guidance. One interviewee stated that audit findings can indicate that a government is experiencing financial stress. Another interviewee noted that millage rates approaching the statutory limit may indicate financial stress.

Regarding other information that would be valuable in the monitoring process but is not currently available to them, three interviewees described information that is not included in AFR, including the assessed property value and sales tax base.[16]

Two interviewees indicated that the qualifications and abilities of the financial staff are crucial to the fiscal health of the government. One of those interviewees noted that it would be valuable to obtain more qualitative information to ensure that the financial staff and governing board members understand and are able to perform their job responsibilities.

Effectiveness of the State Monitoring Programs

The interviewees were asked how effective they believe their monitoring program has been in identifying severe financial stress. Five interviewees indicated that they believe

[16] That information would more likely be available if the AFR contains a statistical section.

their monitoring program has been effective. One interviewee believes their program was not as predictive as it could be. One interviewee indicated that it was difficult to evaluate the program, as the program provided a voluntary tool for use by governments and did not track the results of the governments choosing to use the tool. Two interviewees noted that their monitoring programs have been implemented recently; therefore, it will take a few years to determine whether the program is effective.[17]

The interviewees also were asked how effective their program has been in identifying potential financial issues prior to a government experiencing severe financial stress. Five interviewees (two of whom were among the five in the preceding paragraph) stated that their programs have done well identifying potential issues prior to severe financial stress. In addition, one interviewee noted that their program does a good job overall, but they are aware of isolated cases in which a government's condition deteriorated rapidly in one year and were not identified by the program. One interviewee indicated that their program may not be effective in identifying the potential for severe financial stress. Two interviewees could not provide an assessment of the effectiveness, as their programs were either voluntary in nature or recently implemented.[18]

Other Comments

Two interviewees stated that government-wide financial statements are not useful for determining severe financial stress. However, two other interviewees indicated that government-wide financial statements can be utilized to identify severe financial stress because those statements are the most complete in terms of financial condition now that pension liabilities are required to be reported. One interviewee stated that the definitions of the categories of fund balances are not clear, which they believe results in committed fund balance being a combination of restricted and unrestricted resources, making it more difficult to determine the liquidity of the government.

Survey of Financial Statement Users

The final question of the survey provided users with an opportunity to comment on indicators of severe financial stress, governments in severe financial stress, or going concern that were not specifically addressed in the survey. The most common remarks were in regard to the following topics:

- Additional considerations and disclosures may be needed
- Additional considerations and disclosures may *not* be needed
- Terminology other than "going concern" may be needed

[17] One interviewee, who was performing certain functions of the monitoring procedures required by the program, was not asked to evaluate the effectiveness of the program in this area because of conflict of interest.
[18] See the preceding footnote.

- Consideration of other types of governments may be needed.

The following are representative comments regarding those topics.

Additional Considerations and Disclosures May Be Needed

> It would be a great service if notes to financial statements would indicate simply the imbalance in the entity's budget after deducting all one-time measures to "balance" it, such as layoffs, increasing the time of payment of payables and incurrence of debt or other obligations. In virtually every case, all other information, ratios and debt burdens, is irrelevant. **[Other user]**
>
> * * *
>
> It is important to know whether the state monitors indicators of financial stress, if a government is classified as experiencing some level of financial stress, and whether the state has mechanisms to intervene when stress is indicated. **[Mutual fund]**
>
> * * *
>
> We have many governments that are one major employer/water & sewer customer away from having severe financial difficulties. A disclosure about concentration of use for water and sewer (or other significant utility) would be useful in determining exactly who those governments are so we could assist them in having a back-up plan. One thing we have found that is a good predictor of financial health is whether or not the finance officer is trained in the position, and whether or not the board understands the duties of the position. When issues with either of these are present, the entity will eventually have fiscal distress. **[Oversight body]**
>
> * * *
>
> Perhaps there could be an intermediate defined statement of financial stress . . . I struggled to rank the different measures in terms of important. I think they all matter. **[Oversight body]**

Additional Considerations and Disclosures May* Not *Be Needed

> There is no theoretical or empirical basis for any one or set of variables to explain or predict financial stress among state or local governments, so be very careful in mandating something without such theory or empirical basis. One or two small sample studies do not provide a foundation; most of the extant literature is suspect on reliability or validity concerns and can't be generalized. **[Academic–nonaccounting]**

* * *

I find more information about severe distress from budgets, economic data and news reports than from financial statements. Municipalities that are experiencing severe distress don't produce timely financial statements (typically several years old); there are too many variables contributing to financial distress to squeeze into the structure of the financial statement. Often the "material event" note at the end of an audit is more telling than historical, out-of-date ratios. (e.g. plant closing, change in intergovernmental revenues, material lawsuit, major investment losses in pension investments, or pooled cash, etc.) **[Sell-side]**

* * *

The going concern criteria are very severe [already]. **[Oversight body]**

Terminology Other Than "Going Concern" May Be Needed

Because very few governments cease to exist, I think we need a different term rather than "going concern." Financial statements will often report factors that can be used to surmise financial stress, but they rarely self-identify that stress in an overt manner. While they should be forthcoming about their conditions, they also wish to paint their communities as places that people should want to live and work. These goals are at odds. **[Research organization]**

Consideration of Other Types of Governments May Be Needed

While there have been situations that have garnered news headlines such as Puerto Rico, Detroit, Jefferson County, AL, San Bernardino, etc., a greater number of municipal defaults have occurred with entities such as municipal utility districts, land development entities, and nursing home or assisted living facilities. GASB should keep in mind these types of entities as well as developing disclosure standards for general governments and more essential service BTA's. Further, other types of developmental projects, such as a new toll road or a government-owned arena, convention center or hotel, excessive use of capitalized debt service with accompanying lack of anticipated revenue and changed circumstances affecting the entity such as the loss of a sports team, may be salient factors. **[Private citizen]**

* * *

At the local government level, the governing body often doesn't have the expertise to evaluate the financial data and management assertions. This is especially the case for smaller local governments. **[Oversight body]**

Case Study Analysis

As described in the methodology section of this paper, the objective of the case study analysis was to identify financial ratios that are strong indicators of governments' severe financial stress. That objective aligns with the second research question. The results of that aspect of the case study analysis are summarized in Table 13.

Table 13
Comparison of Case Study Analysis Findings with Major Contributing Factors to a Government's Significant Event

Government Name	Type of Event	Major Contributing Factors	Funds Analyzed[1]	Qualitative Analysis Is Substantiated By Ratio and Trend Analysis	Ratios Categories That Indicate a Clear Trend[2]
Vallejo, CA	Bankruptcy	1. High public safety salaries 2. High pension and OPEB costs 3. Declining tax revenue	GW, GA, BTA, GF, SRF, TGF	1. Yes 2. Yes 3. No	Financial position ratios Financial performance ratios Solvency - liability burden
Menasha, WI	Default	1. Failure of capital project to construct revenue generating asset combined with the significant debt associated with said project	GW, GA, BTA, GF, SRF, TGF, MEF	1. Yes	Financial performance ratios Solvency - debt burden Solvency - liability burden
Prichard, AL	Bankruptcy	1. Population decline 2. Unfunded pension obligations	GW, GA, BTA, GF, SRF, TGF	1. No 2. Data unavailable	None
Warrens, WI	Default	1. Over reliance on a primary taxpaper who declared bankruptcy during the recession	GW, GA, BTA, GF, SRF, TGF, MEF	1. Yes	Liquidity ratios Financial performance ratios Solvency - debt burden Solvency - liability burden
Harrisburg, PA	Receivership	1. Failure of capital project to construct revenue generating asset combined with the significant debt associated with said project	GW, GA, BTA, GF, SRF, TGF, MEF	1. No	None
Jefferson County, AL	Bankruptcy	1. Severe debt combined with unfavorable financial instruments 2. Corruption 3. Loss of revenue source (occupational tax)	GW, GA, BTA, GF, SRF, TGF, MEF	1. Yes 2. No 3. Yes	Liquidity ratios Financial position ratios Financial performance ratios Solvency - debt burden
Central Falls, RI	1. Receivership 2. Bankruptcy	1. Financial mismanagement 2. Pension and OPEB costs 3. High debt service costs	GW, GA, BTA, GF, SRF, TGF	1. To some extent 2. Data unavailable 3. No	Financial performance ratios
San Bernardino, CA	Bankruptcy	1. Mismanagement/ turnover 2. High public safety salaries 3. Dependency on property tax	GW, GA, BTA, GF, SRF, TGF	1. To some extent 2. To some extent 3. To some extent	Liquidity ratios Financial performance ratios
Scranton, PA	Default	1. High employee costs 2. Pension costs	GW, GA, BTA, GF, SRF, TGF, MEF	1. Yes 2. Data unavailable	Liquidity ratios Financial performance ratios
Stockton, CA	Bankruptcy	1. OPEB costs 2. Spending on improvements 3. Recession/ property tax decline	GW, GA, BTA, GF, SRF, TGF	1. Data unavailable 2. Yes 3. To some extent	Financial performance ratios
Detroit, MI	Bankruptcy	1. Reliance on one particular industry 2. Declining population 3. Severe Debt (including pension and OPEB) 4. Financial mismanagement	GW, GA, BTA, GF, SRF, TGF, MEF	1. Yes 2. Yes 3. Yes 4. To some extent	Liquidity Financial position ratios Solvency - debt burden Solvency - liability burden Economics and demographics
Hillview, KY	Bankruptcy	1. Lawsuit 2. Severe debt and other obligations	GW, GA, BTA, GF, SRF, TGF	1. No 2. Yes	Financial position ratios Solvency - debt burden
Dolton, IL	Default	1. Reliance on one particular industry 2. Declining population 3. Declining tax revenue	GW, GA, BTA, GF, SRF, TGF, MEF	1. No 2. No 3. No	None
Harvey, IL	Default	1. Declining population 2. Mismanagement of water enterprise fund 3. Pension costs	GW, GA, BTA, GF, SRF, TGF, MEF	1. No 2. To some extent 3. Yes	Solvency - liability burden Financial performance ratios
Fairfield, AL	Bankruptcy	1. High debt service costs 2. Loss of significant tax payer	GW, GA, GF, SRF, TGF	1. Yes 2. Yes	Financial performance ratios Solvency - debt burden

[1] Abbreviation Ke
GW - Government Wide
GA - Governmental Activities
BTA - Business-Type Activities
GF - General Fund
SRF - special Revenue Funds
TGF - Total Governmental Fund
MEF - Major Enterprise Funds

[2] Ratio Categories include:
Liquidity
Financial Position
Financial Performance
Solvency - Debt Burden
Solvency - Liability Burden
Demographic and Economic

The major contributing factors in Table 13 resulted from the qualitative analyses of the governments. (Refer to the discussion in the methodology section.) For all but one of the case study governments, the significant event was either a bankruptcy filing or a default. One of the governments with bankruptcy also experienced receivership. For the remaining government, the significant event was identified as a receivership.

The column labeled "Qualitative Analysis Is Substantiated by Ratio and Trend Analysis" in Table 13 is the staff's assessment as to whether the quantitative analysis upheld the conclusions in the qualitative analysis. When ratios or trends clearly did not support the qualitative assessment about a specific factor that caused the government's significant event, it is indicated as "no." For example, the qualitative analysis for Harvey, Illinois indicated that one of the contributing factors was the city's declining population. However, the population of Harvey, Illinois fluctuated from year to year over the nine-year period, with no clear trend. Overall, the population decreased by 2 percent, or approximately 700 people.

Some contributing factors were not substantiated by the quantitative analysis because data was not available. For instance, the qualitative analysis of some of the governments found references to generous post-employment benefits in labor contracts as the cause of financial distress. However, not all governments reported complete pension or OPEB information in their AFRs. Information about pension or OPEB that was presented in the AFRs did not always paint the full picture of the benefits in the labor contracts. Such instances are indicated as "data unavailable."

In some instances, the quantitative analyses were unable to definitively link to the qualitative contributing factors. For instance, the qualitative analysis for San Bernardino, California indicated that the city's financial distress was caused by (1) mismanagement and turnover, (2) high public safety salaries, and (3) dependency on property taxes. The assessment of mismanagement is subjective but may be reflected in the quantitative analysis finding of deteriorating liquidity and performance. The second contributing factor may be reflected in the trend analysis finding that expenses increased at a faster pace than revenue, because public safety salaries often are a significant portion of a municipality's noncapital expenses. However, that cannot be conclusively confirmed because expenses are not classified by natural category in the government's AFRs. With regard to property taxes, the trend analysis revealed that property tax revenue in nominal terms was at the same level in 2004 as it was in 2015. However, between 2005 and 2009, the City's property tax revenue increased significantly until the Great Recession, and then decreased significantly in 2009. Property tax revenue as a percentage of total revenue experienced a similar peak and valley. Each of those trends may have some correlation to the identified contributing factors, but the correlation could not be directly substantiated. Such cases are indicated in Table 13 as "to some extent."

The last column in Table 13 reflects the financial ratio categories that showed a relatively clear trend indicating the declining financial condition of the government. The staff observed throughout the performance of this analysis that no single ratio category yielded consistent results across all 15 governments. The most useful category based on the summarized results was the performance ratio category. The performance ratios were determined useful in identifying a trend leading up to a significant event for 10 of the 15 governments. However, performance ratios alone would not be able to signal the severe financial stress for some of the governments analyzed. The debt burden ratios indicated a clear trend for six governments and the liquidity ratios and liability burden ratios indicated a clear trend for five governments each.

As described in the methodology section, the staff believes that for any individual or group of financial ratios to be considered strong indicators of severe financial stress, the multiyear trend analysis of such ratios not only needs to substantiate the major contributing factors to the government's significant event, but also needs to demonstrate a clear and definitive pattern that can signal severe financial stress for all governments analyzed. Based on the observations summarized above, the staff concluded that the overall results from the case study analyses do not provide convincing evidence that any ratios analyzed by the staff can be considered universally strong indicators of severe financial stress for the governments analyzed.

Academic Research: Initial Statistical Analysis

In 2016, the GASB awarded a Crain Grant to Evgenia Gorina, Craig Maher, and Eric Scorsone, to conduct a comprehensive statistical analysis of the predictive power of commonly used financial indicators of severe financial stress. The statistical analysis intended to propose a framework for assessing government financial performance and identify the indicators of severe financial stress.

The researchers identified existing literature on models identifying and predicting municipal financial stress since the 1970s and recognized that the existing models typically use a mixture of economic, demographic, and financial variables in developing financial stress classification models. The municipalities are given a score using the mix of variables and then classified on a scale of fiscal condition. In the researchers' view, one of the key drawbacks of those models is their inability to determine whether some variables are more important than others.

Methodology and Data

The researchers' analytical framework for the assessment of severe financial stress focuses on the analysis of financial ratios to assess governments' financial performance. Economic, demographic, and institutional environments that influence financial performance were viewed as important factors that are outside of the scope of their analysis. The researchers' sole focus on financial performance represents a

considerable departure from existing literature on government fiscal health, which tends to incorporate economic, demographic, and institutional factors as determinants of fiscal health.

The analytical sample included 500 governments: 200 local governments, 100 county governments, 125 independent school districts, and 75 freestanding BTAs. The governments were selected using simple random sampling from the population of governments with annual revenue of $100 million or more in the 2012 COG (the most recent year of the COG at the time of the study design). In addition to those 500 governments, the sample also includes seven non-random cities and counties that experienced severe fiscal stress in at least one of the years in the observation period by declaring bankruptcy or defaulting on debt.

Based on the available data reported in annual financial reports, the researchers focused on three types of financial indicators to capture financial performance in governmental activities and BTAs of a government: (1) liquidity position or cash solvency, (2) budgetary balance or operating solvency, and (3) long-term obligations or long-term solvency. More ratios were calculated for cities, counties, and school districts than for freestanding BTAs because governmental activities ratios were calculated for the latter.

Among ratios used for governmental activities (cities, counties, and school districts), the researchers used four ratios to measure liquidity or cash solvency, which they defined as the availability of funds for spending in the near fiscal future. (See Table 14.) The researchers used two ratios to measure budgetary balance or operating solvency, and two ratios to gauge the long-term debt position or long-term solvency. Similarly, for business-type activities (cities, counties, school districts and free-standing BTAs), the researchers used two ratios to measure liquidity or cash solvency, two ratios to measure budgetary balance or operating solvency, and two ratios to gauge long-term debt position or long-term solvency.

To calculate the ratios, approximately 90 data points were hand collected by the GASB staff from each of the AFRs for each of governments in the sample from fiscal years 2011–2015. The product was more than 2,500 government-years and approximately 225,000 data points.

Table 14
Ratios Used in Gorina, Maher, and Scorsone Study

Ratio Type	Ratio Name	Ratio Inputs
	Governmental Activity/ Funds	
Liquidity	Assigned and unassigned general fund balance	Assigned and unassigned general fund balance÷ Total general fund expenditure
Liquidity	Total general fund balance	Total general fund balance÷ Total general fund expenditure
Liquidity	Cash and investments	Cash and investments÷ total expenses
Liquidity	Noncapital assets to current liabilities	Noncapital assets÷ current liabilities
Budgetary Balance	Budgetary balance	Total revenues÷ total expenses
Budgetary Balance	Unrestricted net position (net assets)	Unrestricted net position÷ total net position (net assets)
Long-Term Debt Disposition	Governmental activity total debt outstanding	Capital assets÷ total outstanding debt
Long-Term Debt Disposition	Governmental activity capital assets	Total revenue÷total outstanding debt
	BTA/Enterprise Funds	
Liquidity	Cash and short-term investments	Cash and investments÷ operating expenses
Liquidity	Current assets to current liabilities	Noncapital assets÷ current liabilities
Budgetary balance	Operating budgetary balance	Operating revenues÷ operating expenses
Budgetary balance	Unrestricted net assets	Unrestricted net position÷ total net position (net assets)
Long-Term Debt Disposition	BTA debt	Capital assets÷ total outstanding debt
Long-Term Debt Disposition	BTA capital assets	Total revenue÷ total outstanding debt

Note: Some ratios refer to both net position and net assets because the years examined spanned the effective date of Statement 63.

The researchers transformed each of the ratios into z-scores using sample means and standard deviations. A z-score shows the relative distance of any value from the sample mean, measured in standard deviations. The z-score approach allowed the researchers to identify outlier observations in each ratio. The researchers summed all z-scores into a single cumulative score of financial condition. That cumulative score is based on the

individual z-scores calculated for liquidity ratios, budgetary ratios, and long-term debt ratios for both governmental activities and BTAs.

The researchers' framework is such that only relatively weak ratios across all dimensions and an outlier position in at least one dimension will make a government appear financially distressed. The framework acknowledges the importance of a simultaneous analysis of financial performance in several dimensions as a qualitative metric of financial condition.

Primary Results Relevant to Research Question 2

The researchers applied this framework separately analyzing and ranking the financial conditions of cities, counties, school districts, and BTAs within their own group of governments. Within each type of government, the researchers identified the top 20 underperformers by the overall financial condition, indicated by the lowest cumulative scores (largest negative numbers) calculated for those governments.

For local governments, the researchers concluded that financial stress manifested itself primarily in the form of liquidity crises for the governmental activities, with the budgetary imbalance in governmental activities and BTAs being the second- and third-most powerful drivers of stress. The conclusion for counties was similar to the localities. For school districts, governmental activities liquidity position was the strongest stressor. Unlike localities, counties, and school districts, the BTAs did not appear to have a particular ratio type that indicates financial stress.

Overall, the researchers concluded that most general purpose governments in financial stress were in crisis because of their weak liquidity positions and, secondarily, budgetary imbalance. Long-term solvency was a relatively rare driver of financial stress on its own and often was coupled with weak liquidity positions. The BTAs of the general purpose governments rarely caused severe financial stress for the primary government. Financial stress was rare among school districts and freestanding BTAs in the sample.

The researchers acknowledged that their proposed monitoring system may have been imprecise in capturing the burden of long-term debt obligations of a government and did not capture a government's funding and the scale of its pension and OPEB obligations. However, they believe that their proposed system of assessing financial condition captured three main dimensions of financial performance at the same time: (1) liquidity, (2) operations, and (3) long-term liabilities. If one dimension of the financial condition was relatively more problematic than the others, the other dimensions may compensate for the weakness of that one dimension. Only localities with multiple weak dimensions or a single dimension in extremely dire straits received a low score in the overall ranking of the cumulative financial condition.

Their system focused only on government financial performance rather than on a broader approach to the evaluation of financial health that includes economic, demographic, and institutional factors. In this way, they distinguished financial condition from a broader notion of *fiscal health* and reinforced a theoretical distinction between actual financial performance and external factors such as the economy and the organizational management that may be independent of fiscal environments in creating and mitigating fiscal pressure.

Academic Research: Second Statistical Analysis

In 2020, the GASB awarded a Crain Grant to Amanda Beck, Ryan Polk, and Mary Stone to develop a comprehensive model for predicting severe financial stress. The intent of funding this research was to complement the first statistical study by, in part, utilizing a similar but distinct methodology and focusing on certain important issues such as incorporating change in ratios over time and ease of use by governments.[19]

For purposes of this study, financial stress was defined as the existence of financial and other problems that could cause a municipality to reduce its current level of public services. This definition was based on Trussel and Patrick (2013b), who hypothesized that reductions in public services are positively correlated with revenue risk, capital expenditures, and debt usage, and are negatively correlated with administrative expenditures and local government resources.

Methodology

The objective of the researchers' study was to develop a model for predicting severe financial stress, which they have defined as a greater than 5 percent decline in core services. The definition of core services is dependent on the type of government, state laws, density of population, and constituents' demands. The model relies on information provided in AFRs, including financial and economic indicators, and produces a sustainability score ("S-Score") that ranges from 0 to 100. Low scores indicate sustainable operations and high scores indicate a likelihood of severe financial stress. The objective of this "sustainability continuum" is to provide internal and external stakeholders a useful communications tool to assess a local government's ability to provide core services (1) when unexpected or adverse events occur or (2) throughout normal economic cycles.

The analysis performed by the researchers utilized stepwise regression and machine learning to identify four indicators predictive of severe financial stress, while controlling for population. The four indicators correspond to four constructs relevant to evaluating governmental financial condition: (1) liquidity, (2) operating solvency, (3)

[19] As of the date of this paper, the researchers are finalizing the report on the research. This section summarizes the preliminary report of the results.

long-term solvency, and (4) revenue capacity. The researchers validated the model using logistic regression, which allowed them to control for extraneous factors with fixed effects for state, year, and type of government. Then, the researchers used multiple discriminant analysis to obtain weights for each factor in the model, which allowed them to calculate an S-Score.

The S-Score is analogous to the Z-score developed by Altman (1968) for predicting corporate bankruptcy but is tailored to the governmental setting and works toward the specific objective of being useful as a communications tool. To improve the S-score to this end, the researchers standardized the score to a 100-point sustainability continuum that ranges from a "green" zone (has cushion to sustain delivery of services during normal economic times and has the ability to manage through unexpected negative events), a "yellow" zone (able to sustain delivery of services during normal economic times but will be challenged to sustain services when unexpected events occur), and a "red" zone (challenged to sustain services during normal economic cycles and may need to cut services when unexpected negative events occur). In practice, the S-Score and the sustainability continuum can serve as an "early warning system," allowing time to take corrective actions before service cuts become inevitable.

The researchers' intention was that the continuum be more than a statistical exercise; they intended it to be used as a communication tool. Statistically predictive ability and explanatory power take high priority in the approach to specifying the S-Score model. However, as a communication tool, their approach incorporates the following objectives:

1. Variables should link, conceptually, to the GASB framework, which measures governmental activity on both a modified-accrual basis (financial resources focus) and accrual basis (economic resources focus).
2. Variables should link, conceptually, to the four constructs to financial distress.
3. Variables should be available for a long horizon to facilitate within-government comparisons over time – particularly given that governments have limited data for making comparisons to other governments.
4. Variables should clearly measure distinct constructs to avoid overlapping interpretations.

Unlike the Z-Score, which predicts a specific event (corporate bankruptcy), the statistical objective of the S-Score is to predict something more abstract: financial distress, indicating a low degree of sustainability. The researchers used the dummy variable *Severe Financial Distress* as the dependent variable in the S-Score model and set it equal to one in cases in which a government reduces core service expenditures per capita—measured as police and fire for general governments, and as educational expenditures for school districts—by more than 5 percent in a single fiscal year.

Data was collected from the Government Finance Officers Association (GFOA) Financial Indicators Database to initially obtain information from city, county, and

school district AFRs.[20] The dataset provides the information to calculate potential independent variables. However, the dataset does not provide expenditures by function needed to calculate the dependent variable. Expenditures for essential services and population came from the COG, which were hand matched with the GFOA dataset based on government name, state, and fiscal year.

The preliminary analyses focused on a pooled sample of all city, county, and school district observations for 2003–2007. The rationale for pooling was that an effective communication tool should be applicable to various forms of government. After adjusting the data (1) to eliminate observations that were missing key values for calculating ratios related to revenues, cash, and service expenditures, (2) to eliminate observations without a 1-year lead time for calculating the dependent variable, and (3) to omit outliers, the resulting sample size was 12,340 observations. That represented 1,833 governments or 7,620 local government years, 3,380 county government years, and 1,340 school district years.

Preliminary Results Relevant to Research Question 2

The four constructs—liquidity, operating solvency, long-term solvency, and revenue capacity— were expected to be negatively associated with financial distress. In the short-term, liquidity indicates a government's ability to meet debt obligations coming due in the near-term. Strong liquidity implies a lower likelihood of significant service cuts in the immediate future. In the medium-term, operating solvency indicates a government's ability to meet upcoming service obligations. In contrast to debt obligations, service obligations generally are implied rather than contractual. Nonetheless, an inability to finance current service costs suggests that service cuts, revenue increases, or debt issuances will be necessary. Accordingly, the researchers expected strong operating solvency to be associated with a lower likelihood of financial distress. Because of their longer time horizon, it was expected that long-term solvency and a strong capacity to build revenue streams would be negatively associated with financial distress. However, governments scoring weak in those metrics may have a better ability to adjust before service cuts are needed, relative to governments with weak liquidity or operating solvency.

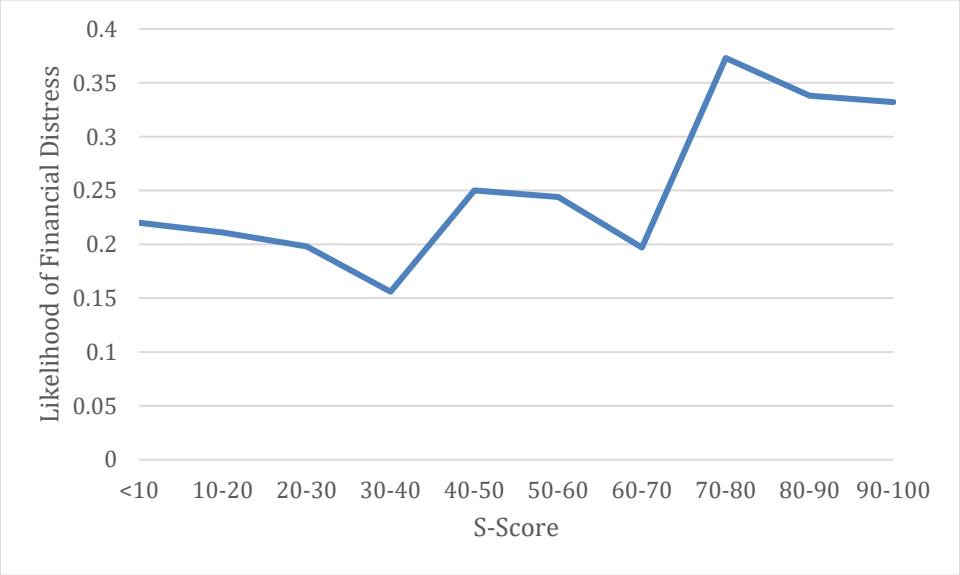
The researchers calculated each government's S-Score, then standardized the S-Scores to correspond to a scale ranging from 0 to 100, as previously discussed, with 0 representing sustainable operations and 100 the most severe financial stress. Table 15 presents the preliminary results of the analysis. The rightmost column displays the likelihood of financial distress within each 10-point range. Figure 1 graphs the results from Table 15.

[20] The researchers intend to add freestanding BTAs as part of the final report.

Table 15
Likelihood of Financial Distress, by Range of S-Score

Score	Number of Government Years	Likelihood of Financial Distress
<10	10,261	0.220
10–20	1,486	0.211
20–30	278	0.198
30–40	179	0.156
40–50	152	0.250
50–60	123	0.244
60–70	117	0.197
70–80	75	0.373
80–90	65	0.338
90–100	229	0.332

Figure 1
Likelihood of Financial Stress, by Range of S-Score



Overall, the preliminary model appears to perform reasonably well in predicting financial stress and provides a useful example of how the final model might be used by governments and external stakeholders to assessments sustainability. Several initial observations about the preliminary results are germane to answering research question 2.

First, an overwhelming majority of government years in the sample had S-scores in the green range. One would expect that for any particular government in any given year

over an extended period, there would not be substantial reductions in core service expenditures per capita.

Second, regardless of where a government lands in the range of S-scores, there is some degree of likelihood of financial stress. For example, government years with scores below 10—the most sustainable relative to other government years—have a 22.0 percent possibility of experiencing severe financial stress. With further refinement, the final probability may be lower. Nevertheless, it points to the idea that severe financial stress—as it is defined in this study, a 5 percent or greater reduction in per capita expenditures for core services—is a possibility even if relevant financial ratios paint a picture of a healthy government.

Third, Table 15 and Figure 1 appear to indicate a counterintuitive result within certain ranges of scores. For instance, scores in the 10–20 range have a 21.1 percent likelihood of financial stress but those in the 30–40 range—in other words, relatively less sustainable than those in the 10–20 range—have a 15.6 percent likelihood. Further refinement as the analysis is finalized may produce a more linear relationship across the score ranges. However, even those preliminary results, if examined in wider ranges, reflect the expected relationship between S-score and likelihood of financial stress:

- Governments with scores below 40 might be considered to be in the green range—their weighted average was a 21.8 percent likelihood of financial stress.
- Governments with scores in the 40–70—conceivably the yellow range—have a 28.5 percent likelihood of financial stress.
- Governments with scores 70 and over—the red range—have a likelihood of severe financial stress of 34.1 percent.

Summary of Findings: Research Question 2

The following highlights summarize the findings related to the second research question regarding other criteria that might better achieve the objective of identifying and disclosing severe financial stress:

- GASB projects on communication methods concepts and economic condition developed a tentative definition of economic condition and its components. FASB standards on disclosure of risks and uncertainties requires entities to disclose information about certain risks and uncertainties that they may face during the course of their operations. PSAB's best practices provide guidance to Canadian governments that choose to report supplementary information on financial condition
- Researchers and practitioners have developed various models, tests, and frameworks that include a myriad of indicators of severe financial stress. Although individual definitions for financial stress and similar terms vary, the terminology is closely related. That is, the words financial or fiscal have been

combined with stress, distress, health, or condition to convey a broad conceptual agreement on what constitutes financial stress for a government.

- Two common themes emerged in the academic literature that explored the definition and causes of financial stress: (1) financial stress is a factor of both financial issues and managerial or administrative issues and (2) the effects of economic cycles may need to be distinguished from the internal effects of a persistent and structural mismatch between resource availability and resource needs.
- Many academic studies have had success in identifying or predicting severe financial stress for some governments, but no definitive single indicator or set of indicators is consistent in identifying or predicting the financial condition of all governments. Researchers also acknowledged limitations to the indicators and models they developed.
- Representatives from state monitoring programs identified various factors not specified in existing GASB guidance that could indicate a government's financial stress, though some acknowledged that they do not rely upon a single indicator or group of indictors to fully assess financial stress.
- User survey respondents differed in their opinions about whether additional guidance on going concern consideration or severe financial stress is needed.
- Although some the case studies could substantiate the qualitative analysis of a government's significant event with the quantitative analysis of financial ratios, the overall analyses did not provide convincing evidence that any one or a group of ratios that can be considered universally strong indicators of severe financial stress for all governments analyzed.
- The Crain Grant-funded two statistical analyses provided two alternative frameworks that potentially can be used as models for identifying governments' financial stress.

Research Findings That Address Research Question 3: User Information Needs Relating to Disclosure of Severe Financial Stress

Findings included here are intended to answer the third research question: What information do financial statement users need with respect to the disclosure of severe financial stress uncertainties?

Literature Review

Although the literature does not specifically address the information that users need from governments regarding severe financial stress uncertainties, it does speak to the usefulness of financial indicators.

As previously discussed, researchers have developed several methodologies to measure or predict financial stress in governments. Many of the methodologies are derivations

or variations of others developed previously. Although models have proven useful for predicting financial stress, many have reached the conclusion that there is no single indicator or set of indicators that will completely capture or measure the financial condition of all types, sizes, and circumstances of governments. Hendrick (2004) noted that because of the complexity and indirect nature of the relationships between the various dimensions of financial condition, it is difficult to construct an all-encompassing indicator that measures a government's condition. Suarez, Lesneski, and Denison (2011) stated that the importance of financial indicators provides stakeholders with a concise and systematic way to organize the abundance of information within a financial statement. Furthermore, the ratios allow information to be comparable if standardized formats are used over time.

Wang, Dennis, and Tu (2007) also noted that studies have shown little agreement among researchers about which model or set of indicators is fully able to encompass and represent a government's financial condition. This is in part because each government has unique operations, social and demographic compositions, and local and state laws that could all influence financial indicators and are rarely included in analysis.

Government-Wide versus Funds

Several authors referred to Statement 34 and the effects on information available for assessing financial condition. Rivenbark, Roenigk, and Allison (2010) developed a framework for analyzing and communicating financial condition. They define financial condition as a government's ability "to meet its ongoing financial, service, and capital obligations based on the status of resource flow and stock as interpreted from annual financial statements."

Using this definition and the financial reporting model established by Statement 34, they incorporated dimensions and indicators that address resource flows and stock of resources at both the governmental and enterprise fund levels, as well as the government-wide level of financial reporting. They state that although other studies such as those conducted by Chaney, Mead, and Schermann (2002), Kamnikar, Kamnikar, and Deal (2006), and Wang, Dennis, and Tu (2007) have provided a wealth of information on the topic of financial condition, those studies were specifically focused on information provided by the government-wide financial statements not information provided by the governmental and enterprise funds.

The framework developed by Rivenbark et al. consists of dimensions and indicators within each dimension, which are used to analyze both resource flow and resource stock information. That information is further classified by its measurement focus and basis of accounting. Table 16 presents the four dimensions of resource flows and resource stocks for the government-wide level and enterprise funds.

Table 16
Government-Wide Level and Enterprise Funds Dimensions and Indicators

Resource Flows				
Dimension	**Description**	**Indicator**	**Calculation**	**Interpretation**
Interperiod Equity	Addresses whether a government lived within its means during the fiscal year	Total margin ratio: Compares the amount of inflow to the amount of outflow	Total revenues ÷ total expenses	Ratio of 1 or higher indicates that a government lived within its financial means.
Financial Performance	Provides magnitude of how financial position changed as a result of resource flows	Percentage change in net assets[21]	Change in net assets ÷ beginning net assets	Percentage increase indicates financial position improved
Self-Sufficiency	Addresses the extent to which service charges and fees covered total expenses	Charge to expense ratio	Charges for services ÷ total expenses	Ratio of 1 or higher indicates that the service is self-supporting
Financing Obligation	Provides feedback on service flexibility of resources devoted to annual debt service.	Debt service ratio	Principal and interest payments on long-term debt ÷ (expenses + principal)	Service flexibility decreases as more resources are committed to annual debt service
Resource Stocks				
Liquidity	Represents a government's ability to address short-term obligations	Quick ratio	(Cash + investments) ÷ (current liabilities – deferred revenue)	A high ratio suggests a government is able to meet its short-term obligations
Solvency	Represents a government's ability to address long-term obligations	Net assets ratio	Unrestricted net assets ÷ total liabilities	A high ratio suggests a government is able to meet its long-term obligations
Leverage	Indicates the extent to which total assets are financed with long-term debt	Debt-to-assets ratio	Long-term debt ÷ total assets	A high ratio suggests a government is overly reliant on debt for financing assets.
Capital	Indicates the condition of capital assets defined as remaining useful life.	Capital assets condition ratio	1 – (accumulated depreciation ÷ capital assets being depreciated)	A high ratio suggests a government is investing in its capital assets

[21] The study predates the issuance of Statement 63.

Table 17 presents the three dimensions of resource flows and resource stocks for governmental funds.

Table 17
Governmental Funds Dimensions and Indicators

Resource Flows				
Dimension	Description	Indicator	Calculation	Interpretation
Service Obligation	Addresses whether or not a government's annual revenues were sufficient to pay for annual operations	Operations ratio	Total revenues ÷ (total expenditures + transfers to the debt service fund – proceeds from capital leases)	A ratio of 1 or higher indicates that a government lived within its annual revenues
Dependency	Provides the extent to which a government is reliant on other governments for resources	Intergov-ernmental ratio	Intergovernmental revenue ÷ total revenue	A high ratio may indicate that a government is too reliant on other governments
Financing Obligation	Provides feedback on service flexibility of expenditures devoted to annual debt service	Debt service ratio	(Principal and interest payments on long-term debt + transfers to the debt service) ÷ (total expenditures + transfers out)	Service flexibility decreases as more expenditures are committed to annual debt service
Resource Stocks				
Liquidity	Represents a government's ability to address short-term obligations	Quick ratio	(Cash + investments) ÷ (current liabilities – deferred revenue)	A high ratio suggests a government can meet its short-term obligations
Solvency	Represents a government's ability to continue service provision	Fund balance as a percentage of expenditures	Available fund balance ÷ (total expenditures + transfers out)	A high ratio suggests a government can continue to provide uninterrupted services
Leverage	Indicates the extent to which a government relies on tax-supported debt	Debt as a percentage of assessed value	Tax-supported long-term debt ÷ assessed value	A high ratio suggests a government is overly reliant on debt

To interpret the financial information, Rivenbark et al. recommended using comparative data from trend analysis and using benchmarks against which a government can compare its performance. Using the Village of Pinehurst, North Carolina as an example, they reported on how the framework is useful for smaller governments. The Village of Pinehurst implemented the framework, and the result was that members of its governing body not only were able to understand the information

and link it back to the financial statements, but also were able to determine ways to improve the Village's financial position based on an analysis of certain indicators.

Prediction Models

Zafra-Gomez, Lopez-Hernandez, and Hernandez-Bastida (2009) developed an alert system for local governments that they believe would be simple for national audit bodies to use to provide early warning of local financial crisis. To develop the alert system, they first examined 121 city councils in Spain with population exceeding 50,000. They considered seven budgetary and financial indicators to measure financial condition, categorized as either short-run solvency or budgetary solvency indicators:

- Short-run solvency
  - Cash Surplus Index: difference between any two of three factors, including net short-term receivables, liquidity, and net short-term liabilities
  - Liquidity Index: liquidity divided by net short-term liabilities
- Budgetary solvency
  - Net Savings Index: difference between the receivables from current budget resources and the budget obligations from non-financial current expenditures, reduced by annual amortization payments (including interest and principal)
  - Taxable-Value Divided by Financial Charge Index: taxable budgetary receivables divided by annual amortization payments (including interest and principal)
  - Current Financial Independence Index: current budgetary payables divided by current budgetary receivables (except current grants)
  - Financial Independence Index: budgetary payables divided by budgetary receivables (except grants)
  - Nonfinancial Budgetary Result Index: current budgetary payables and nonfinancial capital budgetary payables divided by non-financial current budgetary receivables and nonfinancial capital budgetary receivables.

The values of all cities were compared and scored based on relative position within the sample. Cities with values below the 25th percentile received 1 point, those between the 25th and 50th percentiles received 0.5 points, those between the 50th and 75th percentiles receive 0.25 points, and those above the 75th percentile receive no points. The summation of the points received for each of seven individual indicators is evaluated in the scale below:

- A score of 0–1.5 points means that the local authority's financial health is excellent, and no action is required
- 1.6–2.5 points means that the situation is good, although improvement is recommended

- 2.6–3.5 points means that the local authority requires monitoring
- 3.6–5.0 points means that the local authority has some financial tensions, and it should start to take corrective measures
- 5.1–7.0 points means that the local authority is in a situation of financial crisis and should undertake remedial action as a matter of urgency.

Governments that file for Chapter 9 bankruptcy protection arguably represent those governments experiencing the most extreme degree of financial stress. Ghany (2009, 2010) developed a fiscal stress prediction model to measure the financial condition of governmental entities. Ghany suggested that the following indicators have the power to predict a government's financial health and can assist governments in taking corrective action to avoid bankruptcy or reaching the point of being unable to continue as a going concern:

- Per capita personal income
- General fund expenditures as a percentage of taxable valuation
- General fund operating deficit
- Per capita general fund balance
- General long-term debt as a percentage of total assets
- Decrease in real taxable value
- Proportion of revenue restricted for specific uses.

The seven indicators noted above are measurements at a point in time and should be weighted differently in evaluating the financial condition of state and local governments. Each government entity would use a different philosophy in evaluating the weight of these indicators, which they would do annual. The weight would be scored from zero points (no financial stress) to 10 points (high financial stress). A score between zero and four points indicates that a government is fiscally neutral. A score between five and seven indicates that the government should be under fiscal watch, a score between eight and 10 indicates that a government is in financial stress.

State Fiscal Monitoring

The Pew Center on the States (2013) conducted a study of the range of state involvement in local government finances. The research, using current literature, a survey of state officials, and interviews with government finance analysts, focused on governments experiencing financial stress that escalated to state intervention. The study had the following key findings:

- Fewer than half of the states have laws allowing them to intervene in city, town, or county finances.
- Intervention practices vary among the 20 states that have such programs.

- In most cases, states react to local government financial crises instead of trying to prevent them.
- Among states that intervene, some are more aggressive about stepping in to help than others.

The study further concludes that it is rare for municipal governments to seek bankruptcy protection from a court. The study found that out of the 55,000 municipal governments that sell bonds, fewer than 10 file for bankruptcy each year. Furthermore, the study examined and documented the local distress policies in all 50 states:

- Eighteen states had laws designating local fiscal distress.
- Twenty-eight states have bankruptcy authorization.
- Twenty states have an intervention program.

The 20 states that have an intervention program employ the following strategies:

- Receiver, financial manager, overseer, or coordinator appointment
- State agency involvement
- Financial control board or state-appointed board or commission
- Restructure finances: renegotiate, approve, or issue debt
- Restructure finances: renegotiate labor contracts
- Restructure finances: increase taxes, fees, credits
- Emergency financing (enhanced credit backing, loans, grants)
- Supervise finances or technical assistance (including approving budgets)
- Disincorporate, dissolve, or consolidate local government.

Although none of the 20 states employs all strategies noted above, various combinations of multiple strategies are used by each of them.

Pew's study profiled seven states with or without an oversight program to understand the patterns of governments that experienced financial stress, including what motivated states to intervene or not, how political and economic conditions can affect a state's decision whether to get involved, and what results the state efforts have yielded.

- Alabama does not have a monitoring program and traditionally has chosen to stay out of local government financial problems. When the state's largest county was nearing insolvency, the state declined to intervene to avert the largest county bankruptcy in U.S. history.
- California's policy has been that its cities should operate independently from the state, dating back to an 1879 home-rule provision in the California Constitution. The state does, however, try to help school districts that experience financial problems. The state established a fiscal oversight system in 1991 requiring county offices of education to monitor school district revenue, enrollment, spending,

cash flow, debt, and other costs at specific points during the year. The state also arranges emergency loans to help insolvent school districts until they become solvent.

- New Jersey historically has been more willing than other states to assist its troubled local governments and school districts and to intervene in emergencies. There are three state programs (Extraordinary Aid, Special Municipal Aid, and Capital City Aid) for the state's most distressed cities. New Jersey created an agency called the Division of Local Government Services to monitor local government finances. The division approves local budgets to ensure debts can be paid. If a city fails to show it can meet its obligations, the State has the authority to raise taxes on residents. The Division also has approval power over local requests to file for Chapter 9.
- North Carolina has an extensive assistance program run by its Local Government Commission. The Commission imposes budget controls and advises troubled communities. Since 1942, no city, county, or special district in North Carolina has failed to meet a bond obligation. Furthermore, only four cities and a water district have had their financial control taken over by the Commission since its inception.
- Michigan was one of the first states to establish a formal program for intervening in local financial crises. State law allows the state to appoint emergency managers in certain situations in which the government has no plan to resolve its budget problems and would be unable to provide services. From 1990 to 2010, emergency managers were sent to seven cities. In 2011, because of the additional strain of the recession, the state legislature strengthened the power of the emergency managers to allow them to break union contracts to control rising labor costs. Furthermore, it gave the state authority to intervene earlier if its officials determined through financial review that a city was heading for insolvency. The state revised its emergency manager program after voters rejected the law for being too intrusive in local government affairs.
- Pennsylvania's intervention program is aimed at rescuing governments with chronic budget deficits or are in danger of failing to pay employees or defaulting on bond payments. Six of the 27 cities that have entered the program, called Act 47, have successfully emerged; however, a dozen others have been distressed for more than 10 years. The first 2 cities in the program were still in it 26 years later at the time of the Pew study.
- Rhode Island expanded its intervention program to get involved with its distressed cities earlier. Under the program, there is a three-step process for troubled cities: (1) appoint an individual to oversee whether the city is able to balance its budget; (2) if not, appoint a budget commission supplanting the elected leaders; and (3) appoint a receiver whose powers include declaring the city bankrupt.

Overall, states involved in monitoring the finances of their governments have proven beneficial to the recovery efforts of governments in financial distress. The Pew Center on the States (2016) analyzed state statutes for those states who have a fiscal monitoring program and noted that detecting distress early can help the local governments address fiscal problems before they become unmanageable. Nevada, for instance, has both a fiscal monitoring program and an early warning system. With that a system in place, from 1995 to 2016 Nevada had four local governments in "severe financial emergencies" that were resolved and one local government in "technical financial assistance" that was resolved.

Other programs

The New York State Comptroller's Office has a Fiscal Monitoring System that identifies governments that are experiencing fiscal stress (based on ratios similar to those described in preceding sections) and provides certain services and levels of oversight, including:

- Budget reviews
- Technical assistance
- Multiyear financial planning
- Publications and resources
- Training. (New York State Comptroller's Office, 2014)

Other states intervene by notifying local elected officials, legislature, or the general-public. Some states intervene by providing additional funding for the government's operations or debt payments (State of Washington Office of the State Treasurer, 2010).

The California's State Auditor's Office monitors substate governments that are high risk of significant potential for waste, fraud, abuse, or mismanagement, or has major challenges associated with its economy, efficiency, or effectiveness (California Legislative Analyst's Office et al., 2012). As of summer 2020, there were 18 governments subject to monitoring under the State Auditor program. When identifying a high-risk government, the State Auditor may use the following:

- Indication of impaired financial condition (examples include ability to pay its short-term obligations, ability to meet its long-term obligations, and ability to keep its credit rating)
- Certain prior audit findings (such as, findings related to financial or performance issues regarding a program, service, or activity conducted by the government that indicate the risk of waste, fraud, or abuse, and the agency has not taken adequate corrective action)
- Ineffective monitoring of state and local funds

- Ineffective operation involving public health or safety, service delivery, or fiscal operations.

Once a government is identified as high risk, it must develop a corrective action plan within 60 days of the State Auditor's audit report in identifying high-risk governments. In order to be removed from the program, the government must submit written updates and supporting information to the State Auditor every six months regarding its progress in implementing the corrective action plan. The State Auditor will decide to remove the entity from the program once it is determined that the government has satisfactorily implemented the plan and the deficiencies identified have been satisfactorily addressed.

Academic Case Studies

Singla, Comeaux, and Kirschner (2014) conducted an analysis of three cities in California that filed for bankruptcy—San Bernardino, Stockton, and Vallejo—to determine whether there is any relationship between fiscal stress and bankruptcy. The study compared the fiscal health of the cities to that of 58 cities in California that are similarly sized, using the 10-point scaling system developed by Kloha et al. (2005) and the solvency ratio analysis approach developed by Wang et al. (2007).

The results of the analysis revealed that the bankrupt cities were not the most fiscally stressed of the cities that were studied. In other words, there were no extreme factors that distinguished the bankrupt cities from the other 58 cities. The results suggested that there may be weaknesses in the models selected because they were unable to isolate those cities that filed for bankruptcy from those that did not. Singla et al. concluded that the models' inability to identify the bankrupt cities may be an indication that relevant information about poor fiscal health may be missing from the indicators.

Stone, Singla, Comeaux, and Kirschner (2015) conducted a case study of Detroit, which filed for Chapter 9 bankruptcy in July 2013. They posited that indicators can be categorized into two general approaches to the measurement of financial condition: (1) presentation of indicators in their disaggregated state and (2) construction of a scale from aggregated indicators, which can be in the form of ratios. They described the indicators themselves as being presented in two forms: (1) those that are constructed from purely financial data and (2) those that are constructed from demographic and/or economic data. The objectives of the case study were (1) to compare the results to the two approaches identified as measurements of financial condition, (2) to compare the two types of indicators, and (3) to compare the relevancy of the financial indicators.

The study calculated financial indicators for Detroit for the years 2002–2012. The study included disaggregated financial indicators and ratios for cash solvency, operating solvency, assets and liabilities, debt ratios, service solvency, and business-type activity. An analysis of the indicator testing revealed that many of the indicators

were able to demonstrate that Detroit was in poor financial condition. However, although the asset and liability, operating solvency, and BTA indicators were able to highlight Detroit's poor financial condition, some of the indicators that were used to test cash solvency and service solvency were not as effective. Based on that analysis, Stone et al. classified the indicators into three categories: (1) indicators that do not seem to convey a worsening of financial condition or impending crisis, (2) indicators that show a consistent worsening of financial condition, and (3) indicators that show a sharp decline in the year or two before the bankruptcy. (See Table 18.)

Table 18
Classification of Indicators by Ability to Indicate Poor Financial Condition

Indicator	Accounting Basis	Classification
Cash Solvency Indicators		
Cash ratio	Accrual	No sign of impending crisis
Quick ratio	Accrual	No sign of impending crisis
Current ratio	Accrual	No sign of impending crisis
Governmental fund quick ratio	Modified accrual	Consistent decline
Operating Solvency Indicators		
Operating ratio	Accrual	Consistent decline
Surplus per capita	Accrual	No sign of impending crisis
Fund balance as a percent of expenditures	Modified accrual	Consistent decline
Asset and Liability Indicators		
Long-term liability ratio	Accrual	Consistent decline
Long-term liabilities per capita	Accrual	Consistent decline
Net asset ratio	Accrual	Consistent decline
Unrestricted net assets over total liabilities	Accrual	Consistent decline
Unrestricted net assets over expenses	Accrual	No sign of impending crisis
Debt Indicators		
Debt-to-assets ratio	Accrual	No sign of impending crisis
Government wide debt service ratio	Accrual	Consistent decline
Governmental funds debt service ratio	Modified accrual	Consistent decline
Leverage	Modified accrual	Sharp decline prior to bankruptcy
Service Solvency Indicators		
Intergovernmental ratio	Modified accrual	No sign of impending crisis
General revenues over operating revenues	Accrual	Consistent decline
Taxes per capita	Accrual	Sharp decline prior to bankruptcy
Revenues per capita	Accrual	Sharp decline prior to bankruptcy
Expenditures per capita	Accrual	Sharp decline prior to bankruptcy
Business-Type Activity Indicators		
User chargers over program revenues	Accrual	Consistent decline

BTA program revenues over BTA expenses	Accrual	No sign of impending crisis
BTA program revenues over total primary government expenses	Accrual	Consistent decline

After the indicators were calculated, Stone et al. scored Detroit using the 10-point scale developed by Kloha et al. (2005). The results from the 10-point test highlight a potential weakness in the test. In 2005, Detroit received a high score, which is indicative of deteriorating financial condition. However, in the years following 2005, Detroit's score improved and then worsened in 2010–2012. A large city like Detroit has several funds with a great deal of activity flowing in and out all of the funds.

Although Stone et al. found that the asset and liability, operating solvency, and BTA indicators were more effective and performed better than the other indicators in highlighting the declining financial condition of Detroit prior to its bankruptcy filing, they argue that financial condition analysis requires a holistic approach because no single set of indicators would have been able to isolate the fiscal stress that Detroit was experiencing prior to bankruptcy.

The Civic Federation (2015) compared indicators of financial condition for the City of Chicago with 12 other U.S. cities over 2009–2013. The Civic Federation drew from several studies to select 9 indicators for the report, including Brown (1993), Maher and Nollenberger (2009), and Wang et al. (2007). They noted the indicators chosen for are relatively common and accessible but emphasized that does not mean that the indicators not chosen are not relevant to the evaluation of financial condition.

The indicators selected reflect four dimensions of financial condition: (1) cash solvency, (2) budgetary solvency, (3) long-run solvency, and (4) service-level solvency. The eight indicators selected are as follows:

- Working capital-to-expenses ratio (dimension 1)
- Continuing services ratio (2)
- Fund balance ratio (2)
- Operating surplus (deficit) ratio (2)
- Net worth ratio (3)
- Debt service expenditures ratio (3)
- Expenses per capita (4)
- Liabilities per capita (4).

During the five-year period studied, Chicago's financial trends were generally less favorable than 11 of the 12 cities. The Civic Federation also provided an economic snapshot of the period by comparing 4 economic indicators for the 13 cities. Chicago ranked 11 of 13 for population change, unemployment change, and change in GDP.

Furthermore, Chicago ranked second in the inflation indicator with an increase in its change in inflation rate.

The Civic Federation noted that all the cities studied showed at least one indicator with unfavorable trends; however, Chicago ranked 11, 12, or 13 in 6 of the 9 indicators evaluated. Chicago's highest ranking fourth for the operating surplus (deficit) ratio.

Limitations of Financial Indicators

There are obstacles that can prevent financial indicators from being used. For one, high-quality data are hard to find. For example, most cities file audited financial statements; however, those reports are not easily searchable or comparable across governments over time. Beyond that, as already discussed, there is no definition that is generally agreed on for *fiscal health* (Gordon, 2018). The literature suggests that financial condition ratios do not provide an easy answer for how to assess municipal fiscal health. Gordon noted that, even though ratios can be calculated from financial statements, the choice of which indicators and critical values to use is subjective. Further, Gordon acknowledged that developing benchmarks for fiscal distress can be difficult due to the rarity of general purpose governments to go into default or bankruptcy.

Additional limitations of using financial indicators in ratio analysis is the accuracy and validity of the data used. Another study indicated that it is important to take certain factors into account when using ratio analysis to make sure that data from the analysis is comparable (Suarez, Lesneski, and Denison, 2011). Those factors include (1) comparing different organizations that use different accounting procedures and periods, (2) the effects that inflation can have on assets at different times, and (3) conceptual diversity of the ratios not only with different governments but also within the same governments over time.

Other Indicators

Yang and Abbas (2020) studied defaults by local governments from 2009 to 2015. The authors separated the defaults by monetary defaults (failure to pay interest and principal) from nonmonetary defaults (failure to comply with other aspects of the bond indenture). The study concluded that nonmonetary defaults are more prevalent than monetary defaults, and with most defaulted bonds, whether monetary or nonmonetary, being unrated and uninsured. Their study also found that almost all borrowers that defaulted on their GO bonds eventually filed for bankruptcy. An important point made by Yang and Abbas is that since Chapter 9 allows local governments to continue public service provision while working with their creditors, defaults are not synonymous with bankruptcies. They noted that there is no consistent definition of default. They present a table on what they consider default-related events, which is replicated in Table 19.

Table 19
Type of Default by Related Event

Significant Event	Type of Default
Non-payment-related defaults	Technical
Modifications to rights of security holders	Technical
Unscheduled draws on debt service reserves reflecting financial difficulties	Premonetary
Unscheduled draws on credit enhancement reflecting financial difficulties	Premonetary
Substitution of credit or liquidity providers, or their failure to perform	Premonetary
Principal and interest delinquencies	Monetary
Release, substitution, or sale of property securing repayment of the securities	Organizational
Merger, acquisition, or sale of assets	Organizational
Bankruptcy, insolvency, or receivership	Organizational

Source: Yang and Abbas (2020)

Yang and Abbas described the monetary type of default as the failure to pay interest or principle due and stated that monetary default is at the core of fiscal distress because it directly affects the fulfillment of bond repayments. They concluded that technical and premonetary defaults were primarily on non-GO bonds, whereas more bonds experiencing monetary defaults were GO. Overall, all types of defaults predominately occurred on non-GO bonds.

Survey of Financial Statement Users

Disclosures Related to Severe Financial Stress

The survey asked users what information should be disclosed in notes if a government is in severe financial stress. (The percentage of responses in parentheses add up to more than 100 percent because respondents were allowed to select multiple answers.)

- Explanation of how the severe financial stress was identified (80.5 percent)
- Specific financial ratios that indicate severe financial stress (72.4 percent)
- Environmental factors leading to the severe financial stress determination (74.7 percent)
- Management's plan to remediate the severe financial stress (88.5 percent).

Respondents were asked how they would use that information. Respondents generally noted that the information would be used to make investment or credit decisions. Respondents also stated that the information disclosed would be used to make individual assessments of the severity of the financial stress, determine what legislative or oversight actions should or could be taken, and determine the probability of success

of management's plan to remediate the stress. Finally, some respondents also indicated that the information would be used to determine if management, and potentially elected officials, were aware of the magnitude of the financial stress and had the ability and willingness to remediate it. Examples of specific uses within those groups included the following:

- Determine how we can best assist the government in making changes to help resolve their problems
- Evaluate capacity and willingness of guarantors to resolve financial stress
- Follow management's plan to determine whether results are positive or negative
- Compare with governments experiencing similar financial problems in the past to see if the government could address it in the same manner
- Determining if the bond/investment is suitable for my firm's clients.
- Provide insight into the government's ability to manage the situation and its awareness of the gravity of their situation
- Confirm our evaluation of the credit quality of the government and assess the probability of a default and recovery.

Indicators of Severe Financial Stress

Financial position

Users were asked to evaluate the importance of financial position indicators to their assessment of whether a government is in severe financial stress, using a 1-to-10 scale. A response of 1 meant financial position indicators were not important at all and a 10 meant they were very important. As defined in the survey, financial position is a government's financial status at a given point in time (typically the end of a fiscal year). Examples of ratios to evaluate a government's financial position are provided in the survey instrument associated with Part One question 1a. As shown in Table 20, slightly more than half of the respondents (44 of 87, 50.6 percent) rated financial position indicators as very important (10) to assessments of severe financial stress. Furthermore, 83 respondents (95.4 percent) rated the value of financial position indicators as a 6 or above. Financial position indicators received an average rating of 8.60.

Table 20
Value of Financial Position Indicators, All Respondents

Not important at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Very important (10)	Average Response
0	1	1	1	1	7	10	16	6	44	8.60

Table 21 indicates that respondents in each of three major user groups—bond market, academics, and other (including legislative and oversight, citizen groups, research organizations, and miscellaneous other user types)—rated the value of financial position indicators similarly on average.

Table 21
Value of Financial Position Indicators, by User Group

User Group	Average Rating
Bond market participants	8.66
Academics	8.65
Other users	8.50
All respondents	8.60

Respondents who rated financial position indicators as 6 or above were asked to provide the equations for the ratios they use to assess financial position. Many of the survey respondents indicated that the example ratios presented in the survey were the equations used, specifically ratios that compare fund balance or net position to revenues, surplus or deficit, or expenses or expenditures. Some survey respondents indicated that they use a variation of the basic measure; for example, some survey respondents include committed fund balance with assigned and unassigned fund balance for ratio calculations.

Liquidity

Users were asked to evaluate how important liquidity is to their assessment of whether a government is in severe financial stress. As defined in the survey, liquidity is a government's short-term ability to meet financial obligations. Examples of ratios to evaluate a government's liquidity are provided in the survey instrument associated with Part One question 2a. As shown in Table 22, nearly 60 percent of the respondents rated the value of liquidity indicators as either 10 (37 respondents) or 9 (15 respondents). The average rating of liquidity indicators was 8.38.

Table 22
Value of Liquidity Indicators, All Respondents

Not important at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Very important (10)	Average Response
2	1	1	1	3	5	8	14	15	37	8.38

Bond market participants tended to rate liquidity indicators as more important than users in the other two groups, with an average rating of 8.79. (See Table 23.)

Table 23
Value of Liquidity Indicators, by User Group

User Group	Average Rating
Bond market participants	8.79
Academics	8.29
Other users	7.94
All respondents	8.38

Respondents who rated liquidity indicators a 6 or above were asked to provide the equations for the ratios they use to assess liquidity. Most survey respondents who provided ratios noted that they use the example indicators in the survey (in particular, the fund balance ratio and current ratio). Some respondents also described the use of days-cash-on-hand (often calculated as cash ÷ [expenses – depreciation]) or days-of-expenditures-in-cash (often calculated as [cash ÷ expenditures] × 365).

Solvency

Users were asked to evaluate how important solvency is to their assessment of whether a government is in severe financial stress. As defined in the survey, solvency is a government's long-term ability to meet financial obligations. Examples of ratios to evaluate a government's solvency are provided in the survey instrument associated with Part one question 3a. Fewer respondents rated solvency indicators as very important—19 or 21.8 percent. (See Table 24.) Almost half (47.1 percent) rated the value of solvency indicators as 6 or higher. The average rating for solvency indicators was 7.20.

Table 24
Value of Solvency Indicators, All Respondents

Not important at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Very important (10)	Unsure	No Answer	Average Response
4	5	1	2	8	6	7	16	12	19	6	1	7.20

Academics tended to rate solvency indicators as more important than users in the other two groups. (See Table 25.)

Table 25
Value of Solvency Indicators, By User Group

User Group	Average Rating
Bond market participants	7.17
Academics	7.88
Other users	6.86
All respondents	7.20

Respondents who rated solvency indicators a 6 or above were asked to provide the equations for the ratios they use to assess solvency. Survey respondents primarily described the ratios provided as examples in the survey; however, some respondents also described the use of a ratio that compares net position to total liabilities.

Debt burden

Users were asked to evaluate how important debt burden is to their assessment of whether a government is in severe financial stress. As defined in the survey, debt burden is the amount of a government's debt outstanding. Examples of ratios to evaluate a government's debt burden are provided in the survey instrument associated with Part one question 4a. Debt burden indicators generally were viewed as valuable by survey respondents, with 87.4 percent rating them 6 or higher and an average rating of 8.57. (See Table 26.)

Table 26
Value of Debt Burden Indicators, All Respondents

Not important at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Very important (10)	Unsure	No Answer	Average Response
0	1	2	0	3	3	8	15	14	36	1	4	8.57

As shown in Table 27, bond market participants tended to rate debt burden indicators as more important than users in the other two groups.

Table 27
Value of Debt Burden Indicators, By User Group

User Group	Average Rating
Bond market participants	9.00
Academics	8.20
Other users	8.23
All respondents	8.57

Respondents who rated debt burden indicators a 6 or above were asked to provide the equations for the ratios they use to assess debt burden. Respondents primarily described or referenced the example ratios used in the survey, most notably debt per capita, debt service burden, debt service coverage, and debt load.

Liability burden

Users were asked to evaluate how important liability burden is to their assessment of whether a government is in severe financial stress. As defined in the survey, liability burden is the amount of a government's liabilities outstanding. Examples of ratios to evaluate a government's debt burden are provided in the survey instrument associated with Part one question 5a. Liability burden indicators received the lowest rating by survey respondents; nevertheless, almost two-thirds rated their value as 6 or high and the average rating was 7.06. (See Table 28.)

Table 28
Value of Liability Burden, All Respondents

Not important at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Very important (10)	Unsure	No Answer	Average Response
3	4	3	3	12	3	9	16	9	19	5	1	7.06

Table 29 shows that bond market users and academics tended to rate the value of liability burden indicators higher than other users.

Table 29
Value of Liability Burden Indicators, By User Group

User Group	Average Rating
Bond market participants	7.47
Academics	7.67
Other users	6.27
All respondents	7.06

Respondents who rated liability burden indicators a 6 or above were asked to provide the equations for the ratios they use to assess liability burden. Respondents primarily described ratios similar to the example provided in the survey, such as ratios that compare total long-term liabilities to population, revenue, market value of taxable property, or assessed value of taxable property.

Users were asked to evaluate which financial events associated with a government's debt burden and liability burden are relevant in evaluating whether the government is

in severe financial stress. A substantial majority of respondents identified payment defaults, material noncompliance with debt covenants, and guarantors making payments to be relevant to the evaluation of whether a government is in severe financial stress. (See Table 30.)

Table 30
Debt and Liability Burden Financial Events Relevant to Severe Financial Stress

Financial Event	Number of Respondents	Percentage of Respondents
Default in payment of principal or interest	81	93%
Material noncompliance with debt covenants	76	87%
A guarantor has made payment associated with the government's financial obligations	70	80%
Downgraded bond rating	53	61%
Other	35	40%

Respondents who selected Other were asked to provide examples. Some of those respondents (7 of 35) described the use of borrowing to fund operating expenses, deficits, or cash flow shortages. Other respondents (5 of 35) described concerns related to pension or OPEB matters, such as insufficient contributions.

Economic and demographic factors

The survey asked users to describe and rank up to five economic or demographic factors used to assess whether a government is in severe financial stress. Survey respondents identified a variety of factors, which were grouped into similar categories. For each category, a composite score was calculated based on the ranking provided by the respondents (5 points for those ranked first to 1 point for those ranked fifth, with the maximum total score of 435 = 5 × 87). The following seven categories received the highest composite scores:

- Population-related measures (218 points)
- Financial Measures (214 points)
- Employment-related measures (187 points)
- Property value-related measures (169 points)
- Income-level measures (132 points)
- Poverty-related measures (58 points)
- Concentration measures (55 points).

Examples of the factors included in each of the categories above are presented in Table 31.

Table 31
Sample Economic or Demographic Factors for Each Category

Category	Examples
Population	• Population age in percentage distributions by range • Population growth or decline
Financial Measures	• Tax revenue trends and variability • Debt service per capita
Employment	• Unemployment rate • Trends in unemployment rate
Assessment or valuation	• Declining market value of taxable property • Trends in property value • Shrinking tax base
Income	• Per capita income • Median income • Personal income
Poverty	• Poverty rate
Concentration	• Top taxpayers as a percentage of tax base • Diversity of revenue base • Economic concentration • Loss of significant employers

Other factors

The survey asked users to describe and rank up to 5 other factors not yet addressed in the survey that they use to assess whether a government is in severe financial stress. Survey respondents identified a variety of factors, which were grouped into similar categories. For each category, a composite score was calculated based on the ranking provided by the respondents (5 points for those ranked first to 1 point for those ranked fifth, with the maximum total score of 435 = 5 ×87). The following categories received the highest composite scores:

- Debt- or liability- related measures (107 points)
- Pension- or OPEB-related measures (102 points)
- Political-related measures (85 points)
- Financial management-related measures (62 points)
- Budget-related measures (57 points).

Examples of the factors included in each of the categories above are presented in Table 32.

Table 32
Examples of Other Factors in Each Category

Category	Examples
Debt or liability	• Borrowing for operations or noncapital needs • Loss of bond market access
Pension or OPEB	• Funding ratios • Unfunded pension or OPEB liabilities
Political	• Turnover in elected officials • Strength of unions
Financial management	• Inability to maintain structural fiscal balance • Late financial audits • Employee turnover
Budget	• Poor budgeting practices • Structural budget gaps • Late budgets • Unreasonable budgets

Relative importance of categories

The survey asked users to rank the categories of indicators, economic and demographic factors, and other factors discussed in the survey based on how important they are to the respondent's assessment of whether a government is in severe financial stress (with 1 being the most important). A composite scoring method was used for the seven categories, ranging from 7 points for a ranking of 1 to 1 point for a ranking of 7. The highest possible composite score was 567 (81 respondents multiplied by 7 points; 6 respondents did not answer this question).

As shown in Table 33, liquidity indicators have the highest composite score, followed by financial position indicators. Although financial position indicators received the highest number of top rankings (24), liquidity indicators received substantially more second-place rankings than financial position indicators (19 compared to 11).

Table 33
Relative Importance of Categories of Indicators and Factors, All Respondents

Category	Composite Score	Number (Percentage) Ranking First
Liquidity indicators	403	21 (25.9%)
Financial position indicators	386	24 (29.6%)
Solvency indicators	358	15 (18.5%)
Debt burden indicators	324	4 (4.9%)
Liabilities burden indicators	316	5 (6.2%)
Economic and demographic factors	289	4 (4.9%)
Other factors	180	8 (9.9%)

The 38 bond market participant respondents also ranked liquidity indicators as most important, based on both the highest composite score and the respondents ranking liquidity indicators as the most important category. (See Table 34.)

Table 34
Relative Importance of Categories of Indicators and Factors to Bond Market Participants

Category of Indicator or Factor	Composite Score	Number (Percentage) Ranking First
Liquidity indicators	197	14 (38.8%)
Financial position indicators	164	8 (22.2%)
Solvency indicators	146	5 (13.9%)
Liabilities burden indicators	142	1 (2.8%)
Debt burden indicators	138	2 (5.6%)
Economic and demographic factors	123	1 (2.8%)
Other factors	84	5 (13.9%)

Although the 17 academic respondents also ranked liquidity indicators as the most important, they did not rank financial position indicators as highly as bond market participants and other users. (See Table 35.)

Table 35
Relative Importance of Categories of Indicators and Factors to Academics

Category of Indicator or Factor	Composite Score	Number (Percentage) Ranking First
Liquidity indicators	82	5 (31.3%)
Solvency indicators	67	3 (18.8%)
Liabilities burden indicators	67	2 (12.5%)
Financial position indicators	66	2 (12.5%)
Debt burden indicators	63	2 (12.5%)
Economic and demographic factors	59	0 (0.0%)
Other factors	35	2 (12.5%)

The 32 "Other" users were the only group that did not rank liquidity indicators as most important. Instead, financial position indicators had the highest composite score and most first-place rankings among other users. (See Table 36.)

Table 36
Relative Importance of Categories of Indicators and Factors to Other Users

Category of Indicator or Factor	Composite Score	Number (Percentage) Ranking First
Financial position indicators	156	14 (48.3%)
Solvency indicators	145	7 (24.1%)
Liquidity indicators	124	2 (6.9%)
Debt burden indicators	123	0 (0.0%)
Economic and demographic factors	107	3 (10.3%)
Liabilities burden indicators	107	2 (6.9%)
Other factors	61	1 (3.4%)

Summary of Findings: Research Question 3

The following highlights summarize the findings related to the third research question regarding information financial statement users need with respect to the disclosure of severe financial stress:

- There is no shortage of studies that evaluate the usefulness and effectiveness of financial indicators. Many of the indicators those studies identified were useful in identifying governments' financial stress to some extent.
- Some researchers acknowledged the limitations of the financial indicators and pointed out that there is disagreement about which model or set of indicators most fully encompasses or best indicates a government's financial condition.
- The majority of the user survey respondents expressed interest in different aspects of information related to severe financial stress, including the causes, financial indicators, environmental factors, and management's remediation plans.
- User survey respondents value all categories of indicators of severe financial stress identified in the survey as important but view the relative importance of each category differently. Bond market participants ranked liquidity indicators as the most important, followed by financial position and solvency. Academics also ranked liquidity as most important, but rated solvency and liability burden as second and third, respectively. Other users ranked financial position indicators as the most important, followed by solvency and liquidity.
- User survey respondents provided a range of other factors that they use to assess whether a government is in severe financial stress that the survey did not identify and ranked the importance of the factors by category. The categories that were given the highest scores by the respondents, in order of importance, are debt or liability related, pension or OPEB related, political related, financial management related, and budget related.

INTRODUCTION

This attachment to the research memorandum provides supporting materials related to the pre-agenda research on Going Concern Disclosure pre-agenda research. Those materials include the following:

A. References for the literature review
B. Protocol for the state fiscal monitoring program interviews
C. Indicators used by those state fiscal monitoring programs
D. User survey instrument.

A. REFERENCES FOR THE LITERATURE REVIEW

Altman, Edward. I. “Financial Ratios, Discriminate Analysis, and the Prediction of Corporate Bankruptcy.” *The Journal of Finance* 23, no. 4 (1968): 589-609.

Arnett, Sarah. “State Fiscal Condition: Ranking the 50 States.” Working Paper No. 14-02. 2014. (Arlington, VA: Mercatus Center of George Mason University).

Alter, Theodore R., Diane K. McLaughlin, and Nancy E. Melniker.. “Analyzing Local Government Fiscal Capacity.” 1986. (University Park, PA: Pennsylvania State University Cooperative Extension Service).

Brown, Ken. "The 10-Point Test of Financial Condition: Toward an Easy-to-Use Assessment for Smaller Cities." *Government Finance Review* 9, no. 6. (1993): 21-26.

California Legislative Analyst's Office, Edgar Baral, Jennifer Kuhn, and Mac Taylor. "School District Fiscal Oversight and Intervention." (2012).

Chaney, B. A., D. M. Mead, and K. R. Schermann. "The New Government Financial Reporting Model: What It Means for Analyzing Government Financial Condition." *Journal of Government Financial Management* 51, no.1 (2002): 26-31.

Citizens Research Council of Michigan. "Avoiding Local Government Financial Crisis: The Role of State Oversight." (2000).

Crawford & Associates, P.C. *The Crawford Government Finance Performeter: A Financial Statement Analysis Using Indicators of the Financial Health and Success of the City of Guymon, Oklahoma as of and For the Year Ended June 30, 2001*. Unpublished report. n.d.

Crawford & Associates, P.C. *The Performeter: A Financial Statement Analysis Using Indicators of the Financial Health and Success of the State of Michigan as of and For the Year Ended September 30, 2001*. Unpublished report. n.d.

Denneen, Jeff, and Tom Dretler. "The Financially Sustainable University". Bain & Company. (2020). https://www.bain.com/insights/financially-sustainable-university.

Ghany, Khaled Abdel. "Measuring Financial Stress on State and Local Governments." *The CPA Journal* 79, no.10 (2009).

_____. "A Prediction Model for Chapter 9 Bankruptcies." *Commercial Lending Review* 25, no. 2 (2010): 21-22.

Gordon, Grey and Pablo Guerron-Quintana. " On Regional Borrowing, Default, and Migration." *Federal Reserve Bank of Richmond Working Papers* 19, no. 4 (February 7, 2019): 1–66.

Gordon, Tracy. "Predicting Municipal Fiscal Distress: Aspiration or Reality." Tax Policy Center. Lincoln Institute of Land Policy, September 25, 2018. https://www.taxpolicycenter.org/publications/predicting-municipal-fiscal-distress-aspiration-or-reality.

Gorina, Evgenia, Craig Maher, and Mark Joffee. "Local Fiscal Distress: Measurement and Prediction." *Public Budgeting & Finance* 38, no. 1 (May 5, 2017): 72-94.

Hendrick, Rebecca. "Assessing and Measuring the Fiscal Health of Local Governments: Focus on Chicago Suburban Municipalities." *Urban Affairs Review* 40, no 1 (2004): 78-114.

Honadle, Beth Walter, and Mary Lloyd-Jones. "Analyzing Rural Local Governments' Financial Condition: An Exploratory Application of Three Tools." *Public Budgeting & Finance* 18, no. 2 (1998): 69-86.

Kamnikar, J. A., E. G. Kamnikar, and K. H. Deal. "Assessing a State's Financial Condition." *Journal of Government Financial Management* 55, no. 3 (2006): 30-36.

Kleine, Robert, Philip Kloha, and Carol S Weissert. "Monitoring Local Government Fiscal Health: Michigan's New 10 Point Scale of Fiscal Distress." *Government Finance Review* 19, no. 3 (June 2003).

Kloha, Philip, Carol S Weissert, and Robert Kleine. "Developing and Testing a Composite Model to Predict Local Fiscal Distress." *Public Administration Review* 65, no. 3 (May/June 2005): 313-323.

KPMG LLP, Prager, Sealy & Co., LLC, and BearingPoint Inc. *Strategic Financial Analysis for Higher Education,* sixth edition. (Mercer Island, WA: Prager, Sealy, 2005).

League of California Cities. "The California Municipal Financial Health Diagnostic." 2016. http://www.californiacityfinance.com/Diagnostic1602.pdf

Lyken-Segosebe, Dawn, and Justin Cole Shepherd. "Securing Tennessee's Future: Learning from Closed Institutions–Indicators of Risk for Small Private Colleges and Universities." 2013. (Nashville, TN: Peabody College of Education and Human Development Vanderbilt University)

Maher, C., and K. Nollenberger. "Revisiting Kenneth Brown's 10-Point Test." *Government Finance Review* 25, no 5 (2009).

Martin, James, and James E. Samels & Associates. *Turnaround: Leading Stressed Colleges and Universities to Excellence*. Baltimore, MD: John Hopkins University Press, 2009.

Mead, Dean Michael. Assessing the financial condition of public school districts: some tools of the trade. In William Fowler, ed., *Selected Papers in School Finance, 2000-01*. Washington, DC: U.S. Government Printing Office, 2001a.

_____.*An Analyst's Guide to Government Financial Statements*. Norwalk, CT: GASB, 2001b.

_____."A Manageable System of Economic Condition Analysis for Governments." In *Handbook of Public Financial Management*, by Howard A. Frank, 383-417. NY: Taylor & Francis, 2006.

Nollenberger, K, S. M. Groves, and M. G. Valente. *Evaluating Financial Condition: A Handbook for Local Government*. Washington, D.C.: ICMA, 2003.

Office of the New York State Comptroller. "Fiscal Stress Monitoring System." 2014.

Pammer, Jr., William J. *Managing Fiscal Strain in Major American Cities: Understanding Retrenchment in the Public Sector*. New York, NY: Greenwood Press, 1990.

Rivenbark, William C, Dale J Roenigk, and Gregory S. Allison. "Conceptualizing Financial Condition in Local Government." *Journal of Public Budgeting, Accounting and Financial Management* 22, no. 2 (2010): 149-177.

Rubin, Irene S. *Running in the Red: The Political Dynamics of Urban Fiscal Stress*. Albany, NY: State University of New York Press, 1982.

Shi, Yu. "Using Fuzzy Logic to Evaluate and Compare State Financial Condition During and after the Great Recession of 2008: Fuzzy Rule-Based Systems." *Public Administration Quarterly* (2020): 394-432.

Singla, Akheil, James Comeaux, and Charlotte L Kirschner. "Blind, Broke, and Bedlam: Differentiating Fiscal Stress from Bankruptcy in California." *Public Finance and Management* 14, no. 3 (2014): 306-328.

State of Washington Office of the State Treasurer. "Washington State Local Government Financial Health Indicators." 2010.

Stone, Samuel B, Akheil Singla, James Comeaux, and Charlotte Kirschner. "A Comparison of Financial Indicators: The Case of Detroit." *Public Budgeting & Finance* 35, no. 4 (2015): 90-111.

Suarez, Virginia, Cheryll Lesneski, and Dwight Denison. "Making the Case for Using Financial Indicators in Local Public Health Agencies." *American Journal of Public Health* 101, no. 3 (2011): 419–25.

The Civic Federation. *Indicators of Financial Condition: A Comparison of the City of Chicago to 12 Other U.S. Cities from FY2009 through FY2013*. Chicago: The Civic Federation, 2015.

The Pew Center on the States. *The State's Role in Local Government Financial Distress*, The Pew Charitable Trusts, July 2013.

_____.*Distressed localities: State strategies to detect the warning signs*. National Conference of State Legislatures Webinar, 2016.

Trussel, John M. and Patricia A. Patrick. "A Predictive Model of Fiscal Distress in Local Governments." *Journal of Public Budgeting, Accounting & Financial Management* 21, no. 4 (2009): 578-616

_____."Predicting Fiscal Distress in Special District Governments." *Journal of Public Budgeting, Accounting & Financial Management* 25, no. 4 (2013a): 589-616.

_____."The Symptoms and Consequences of Fiscal Distress in Municipalities: An Investigation of Reductions in Public Services." *Accounting and the Public Interest* 13, no. 1 (2013b): 151-171.

Wang, Xiaohu, Lynda Dennis, and Yuan Sen (Jeff) Tu. "Measuring Financial Condition: A Study of U.S. States." *Public Budgeting & Finance* 27, no. 2 (2007): 1-21.

Yang, Lang, and Yulianti Abbas. "General-Purpose Local Government Defaults: Type, Trend, and Impact." *Public Budgeting & Finance*40, no. 4 (2020): 62-85.

Zafra-Gomez, Jose Luis, Antonio Manuel Lopez-Hernandez, and Agustin Hernandez-Bastida. "Developing an Alert System for Local Governments in Financial Crisis." *Public Money & Management* 29, no. 3 (2009): 175-181.

B. PROTOCOL FOR THE STATE FISCAL MONITORING PROGRAM INTERVIEWS

Before we begin, do you have any questions?

As mentioned in the email you received, we record interviews for internal analytical purposes. The recordings are not available to anyone outside of the GASB and our parent organization, the Financial Accounting Foundation. We would ask for your feedback on the accuracy of any specific mention of your program in advance of reporting the results of the research.

Is it okay with you if we proceed with recording the interview?

[Start recording]

[Have the interview participant(s) state their names and the name of their organization.]

Description of the Monitoring Program

1. What is the official name of your financial monitoring program?

2. What types of governments are included in the program?

3. How would you describe what your monitoring program does?

    3a. What happens when a government is identified as [in financial distress/facing financial stress/in poor financial health]? [For instance, is there additional monitoring, state intervention, provision of assistance, and so on?]

4. How often are the monitoring procedures performed?

4a. Do you believe the monitoring program promptly identifies [financial distress/ financial stress/poor financial health]? Why or why not?

5. Does the program focus on individual years only or does it track indicator trends over time?

6. Does the program provide benchmarking against other governments? If so, how are those benchmarks and/or peer groups determined?

Information Used in the Monitoring Program

7. What types of information does the program collect for the monitoring program?

> 7a. Does the monitoring program utilize information not found in the local government's reporting package (ACFR, State Filing, etc.)?
>
> 7b. [Request a complete list of the information they collect, if we do not already have it.]

8. Does your monitoring program examine information over multiple years for each government?

> 8a. How many years does the program analyze in the trending model?

9. What information, if any, would be valuable to you in monitoring that is not currently available to you? What would make that information valuable?

Effectiveness of the Monitoring Program

10. Have there been any evaluations or assessments of whether your monitoring program is successful at [evaluating financial health/identifying financial distress]? What were the results? [Ask for a copy of the results, if available.]

> 10a. How effective do *you* believe your program has been in [evaluating financial health/identifying financial distress]?
>
> 10b. How good a job does your program do at identifying potential financial issues prior to a government having a major problem, such as missing a debt service payment or missing a payroll?
>
> 10c. What instances have there been, if any, of a government that was *not* identified as [in financial distress/facing financial stress/in poor financial health] actually having financial problems?

11. What specific ratios or indicators do you believe are the best predictors of financial distress?

> 11a. Why do you believe these are the best predictors?

12. Are there any indicators used in the program that are rarely met by governments?

Other Issues

13. What public reporting is there, if any, of the results of your evaluation of governments' [financial health/exposure to financial stress/financial distress]?

14. What else would you like to tell the GASB about your program or financial monitoring in general, if anything?

15. What conditions/indicators that are not included in the program, if any, do you believe also indicate of financial distress?

15a. Why do you believe these indicators would be useful?

C. INDICATORS USED IN STATE FISCAL MONITORING PROGRAMS INTERVIEWED BY GASB STAFF

State 1: Fiscal Assessment and Accountability Program

- A declining balance determined to jeopardize the fiscal integrity of a school district. However, capital outlay expenditures for academic facilities from a school district balance shall not be used to put the school district in fiscal distress.
- Material failure to properly maintain school facilities
- Material violation of local, state, or federal fire, health, or safety code provisions or law
- Material violation of local, state, or federal construction code provisions or law
- Material state or federal audit exceptions or violations
- Material failure to provide timely and accurate legally required financial reports to the Department, the Division of Legislative Audit, the General Assembly, or the Internal Revenue Service
- Insufficient funds to cover payroll, salary, employment benefits, or legal tax obligations
- Material failure to meet legally binding minimum teacher salary schedule obligations
- Material failure to comply with state law governing purchasing or bid requirements
- Material default on any school district debt obligation

- Material discrepancies between budgeted and actual school district expenditures
- Material failure to comply with audit requirements
- Material failure to comply with any provision of the State Code that specifically places a school district in fiscal distress based on noncompliance
- Any other fiscal condition of a school district deemed to have a material detrimental negative impact on the continuation of educational services by that school district

State 2: Municipal Financial Health Diagnostic

Financial Distress Checklist

A thirteen-point list of key indicators to assess the near term financial health of the city's general fund and other operations. The checklist is intended for use by policy makers and community members to ask the important questions and get the necessary answers. Also with this list is *Warning Signs – Indications of Crisis* – five indications that the city is in financial crisis.

- The city has recurring general fund operating deficits.
- General fund reserves are decreasing over multiple consecutive years.
- General fund current liabilities (including short-term debt and accounts payable within 60 days) are increasing. Cash and short-term investments are decreasing.
- General fund fixed costs, salaries and benefits are increasing over multiple years at a rate faster than recurring revenue growth.
- The general fund is subsidizing other enterprises or special funds.
- The city council's authority to make changes is constrained by charter, contract, or law. (e.g. binding arbitration, minimum spending, minimum staffing or compensation formulas, etc.)
- The general fund budget has been balanced repeatedly with reserves, selling assets, deferring asset maintenance.
- The general fund budget has been balanced repeatedly with short-term borrowing, internal borrowing or transfers from special funds.
- General fund pension liabilities, post-employment or other non-salary benefits have been repeatedly deferred or costs have not been determined, disclosed or actuarially funded.

- General fund debt service payments have been "backloaded" into future years.
- Ongoing general fund operating costs are being funded with temporary development revenues.
- Financial Reports are not being filed on time. (ACFR, Annual Audit, State Controller's Financial Transactions Report)
- Public service levels are far below standards needed in this community.

Warning Signs – Indications of Crisis

- Failure to pay an undisputed claim from a creditor within 90 days past claim date.
- Failure to forward income taxes withheld or Social Security contributions for over 30 days past the due date.
- Failure to make *required* pension fund contributions on time.
- Missing a payroll for 7 days.
- General fund available unrestricted balance for the end of the current fiscal year will be negative.

The Financial Health Indicators

Linked to the thirteen-point Financial Distress Checklist, the Financial Health Indicators provide more detailed formulas and methods for determining financial condition and will need to be completed by a team of qualified financial analysts.

- Net operating deficit/surplus
  - Gross annual deficit/surplus as a percent of revenues = [(gross current revenues)-(gross current expenditures)] ÷ gross current revenues
  - Net operating deficit/surplus as a percent of revenues = [(net operating revenues) – (temporary revenues) – (net operating expenditures)] ÷ net operating revenues
  - Net true operating deficit/surplus as a percent of revenues = (net operating revenues) – (temporary revenues) – (net operating expenditures) – (unbudgeted current liabilities) ÷ net operating revenues
- Fund balance

  - Fund balance as a percent of expenditures = (unassigned fund balance + assigned fund balance) ÷ net operating expenditures
- Capital asset condition
  - Change in capital asset condition = (ending net value of capital assets – beginning net value of capital assets) ÷ beginning net value of capital assets
- Liquidity
  - Liquidity = cash and short term investments ÷ current liabilities
- Fixed costs and budget flexibility
  - Fixed costs as a percent of expenditures = fixed costs ÷ net operating expenditures
  - Fixed costs and labor as a percent of expenditures = (salaries + wages + benefits + fixed costs) ÷ net operating expenditures
- General fund subsidy of other funds
  - Subsidy costs as a percent of expenditures = (subsidy expenditures and subsidy transfers out) ÷ net operating expenditures
- Constraints on budgetary discretion: do charter provisions or other legal commitments (contracts, court decisions/settlements restrict the city council's authority?
  - Binding arbitration: required submission of a dispute to a third person whose decision is obligatory
  - Formulas require minimum employee compensation, hiring or staffing levels, or spending levels or require the agreement of others
  - General fund is pledged as support, or public facilities as security, for non-general fund debt
  - Others: restrictions on contracting out, voter-approved tax expiring
- Balancing the budget with temporary funds
  - Has the general fund been balanced with reserves, selling assets, or deferring asset maintenance or operating costs?
- Balancing the budget with borrowing
  - Has the general fund been balanced with short-term borrowing, internal borrowing (including transfers that must be repaid), or amounts owed to other funds from pooled cash?

- Balancing the budget by deferring employee compensation costs
  - Has the general fund been balanced by deferring payments for or not paying the current actuarially determined costs of pensions, other post-employment benefit liabilities (e.g., compensated absences, deferred comp, retiree medical, etc.); risk programs (e.g., workers comp and liability funds, etc.); or pension obligation bonds which presume overly optimistic payroll growth?
- Balancing the budget with backloaded debt service payments
- Funding operating costs with non-recurring development revenues
  - Has the general fund been balanced relying on non-recurring revenues, such as from land-use development, to fund on-going operating costs or debt service other than work associated with those temporary revenues? (e.g., developer fees or taxes, sales taxes from construction, etc. funding other than building/planning staff)
- Timeliness and accuracy of financial reports
  - Have annual financial reports (ACFR and State Controller's Financial Transactions Report) not been filed on time?
- Service level solvency
  - Are public service levels below standards in this community? (e.g., emergency response times, road condition, facility maintenance, etc.)

State 3: Municipal Finance Advisory Commission

- High reliance on revenues from state and federal sources
  - Combined state and federal revenue from general fund over 35 percent of total general fund revenues, including transfers in to the general fund
- General fund, fund deficit
  - General fund liabilities and deferred inflows exceed general fund assets and deferred outflows
- Unrestricted general fund balance less than 2 months of the general fund's annual revenues (including transfers in)
- Enterprise or internal service fund type deficit
- Moody's bond rating lower than upper medium grade (below "A")

- Current year under review general fund operating deficit (including other financing sources and uses)
  - (Revenue + other financing sources) - (expenditures + other financing uses)
- Current and prior year general fund operating deficit
- Unfunded net pension liability of 40 percent or higher, but below 60 percent
- Unfunded net pension liability of 60 percent or greater
- Low current year tax collection rate (below 95 percent)
- Low overall tax collection rate (below 90 percent)
- High debt to grand list ratio

State 4: Local Governmental Entity Financial Condition Assessment

- Change in net position ÷ beginning net position
- Unassigned and assigned fund balance + unrestricted net position (constant dollar)
- Unassigned and assigned fund balance ÷ total expenditures
- Cash & investments ÷ current liabilities
- Cash & investments ÷ [(total expenditures *or* total operating expenses) ÷ [total revenues / population]
- Current liabilities ÷ total revenues *or* total operating revenue
- Long-term debt (constant dollar$) ÷ population
- Excess of revenues over (under) expenditures ÷ total revenues
- Operating income (loss) ÷ total operating revenues
- Intergovernmental revenues ÷ total revenues or total operating revenues
- Unassigned and assigned fund balances *or* unrestricted net position ÷ total revenues *or* total operating revenues
- Total revenues (constant dollar) ÷ population
- Debt service ÷ total expenditures
- Total expenditures (constant dollar) ÷ population
- Accumulated depreciation ÷ capital assets
- Pension plan ratio
- OPEB funded ratio
- Millage rate

State 5: Fiscal Stress Monitoring System

Financial Indicators

- Year-end fund balances
- Operating deficits/surpluses
- Cash position
- Use of short-term debt for cash flow
- Fixed costs (evaluated for local governments only)

Environmental Indicators

Local Governments

- Population
- Age
- Poverty
- Property values
- Dependence on revenue from other government units (which can be highly variable)
- Constitutional tax limits
- Sales tax revenue

Schools

- Property values
- Enrollment
- Budget vote trends
- Graduation rate
- Free or reduced lunch participation

State 6: Fiscal Condition Analysis Model

- Total margin ratio

  - Governmental activities: total margin ratio = total resource inflow (program revenues + total general revenues and net transfers) ÷ total resource outflow (total expenses)
  - Enterprise funds: total margin ratio = total resource inflow (operating and nonoperating revenues + transfers in) ÷ total resource outflow (operating and nonoperating expenses + transfers out)
- Percent change in net assets = change in net assets ÷ net assets, beginning
  - Same calculation for governmental activities and enterprise funds
- Charge to expense ratio
  - Governmental activities: charge to expense ratio = charges for services (fees, fines, and charges for services) ÷ total expenses
  - Enterprise funds: charge to expense ratio = charges for services ÷ (operating + nonoperating expenses)
- Debt service ratio
  - Governmental activities: debt service ratio = debt service (principal and interest payments on long-term debt) ÷ (total expenses + principal)
  - Enterprise funds: debt service ratio = debt service (principal and interest payments on long-term debt) ÷ operating and nonoperating expenses + principal)

State 7: Fiscal Distress System

- Unrestricted net assets or position of governmental type activities
- Unassigned fund balance of the general fund
- Change in unrestricted net assets or position for governmental type activities
- Change in unassigned fund balance of the general fund
- General fund balance ÷ general fund revenues
- Decline in general fund tax revenue
- Percentage of general fund revenues that exceed general fund expenditures
- General revenues of governmental type activities ÷ net expenses of governmental type activities
- General fund intergovernmental revenues as a percentage of total general fund revenues

- Condition of capital assets
- Debt service expenditures ÷ total revenues
- Unrestricted net assets or position of governmental type activities ÷ average daily expenses of governmental type activities
- Unassigned fund balance of the general fund ÷ average daily expenditures of the general fund
- Cash & investments of the general fund ÷ average daily expenditures of the general fund
- Total liabilities ÷ net assets or position
- Direct and material non-compliance (budgetary violation)

State 8: Early Intervention Program

- The municipality has maintained a deficit over a three-year period, with a deficit of 1 percent or more in each of the previous fiscal years
- The municipality's expenditures have exceeded revenues for a period of three years or more
- The municipality has defaulted in payment of principal or interest on any of its bonds or notes or in payment of rentals due any authority
- The municipality has missed a payroll for 30 days
- The municipality has failed to make required payments to judgment creditors for 30 days beyond the date of the recording of the judgment
- The municipality, for a period of at least 30 days beyond the due date, has failed to forward taxes withheld on the income of employees or has failed to transfer employer or employee contributions for Social Security
- The municipality has accumulated and has operated for each of two successive years a deficit equal to 5 percent or more of its revenues
- The municipality has failed to make the budgeted payment of its minimum municipal obligation as required by section 302, 303 or 602 of the act of December 18, 1984 (P.L. 1005, No. 205), known as the Municipal Pension Plan Funding Standard and Recovery Act, with respect to a pension fund during the fiscal year for which the payment was budgeted and has failed to take action within that time period to make required payments

- A municipality has sought to negotiate resolution or adjustment of a claim in excess of 30 percent against a fund or budget and has failed to reach an agreement with creditors
- A municipality has filed a municipal debt readjustment plan pursuant to Chapter 9 of the Bankruptcy Code (11 U.S.C. § 901 et seq.)
- The municipality has experienced a decrease in a quantified level of municipal service from the preceding fiscal year which has resulted from the municipality reaching its legal limit in levying real estate taxes for general purposes. For determining levels of municipal service for the year 1987, the department shall utilize annual statistical data since the year 1982 to determine a pattern of decrease in delivery of municipal services since 1982

State 9: Local Government Financial Intelligence Tool

- Operating margin
- Change in cash position
- Cash balance sufficiency
  - How many days the balance in the general fund would be able to cover operating expenditures
- Debt load
  - Governmental fund debt service payments are less than 12 percent of revenues
- Enterprise self-sufficiency
  - Charges for services and other revenues collected by the enterprise fund should be greater than its expenses
- Other factors to consider when evaluating financial condition
  - Known or potential changes in funding
  - Known or potential future cost increases
  - Business risks
  - Resources in other funds
    - Unrestricted resources in other funds that are potentially available to pay for or mitigate costs that the general fund is currently bearing
  - Nature, length, and timing of debt service
  - Contingencies

- Capital planning
- Capital asset condition
- Revenue flexibility
- Spending flexibility

D: USER SURVEY INSTRUMENT

Indicators of Severe Financial Stress
Survey of Users of Government Financial Statements

Thank you for participating in this survey to inform the Governmental Accounting Standards Board's (GASB) research on the effectiveness of indicators of severe financial stress of state and local governments.

Governments have a responsibility to evaluate whether there is substantial doubt about their ability to continue as a going concern beyond the financial statement date. However, even when under severe financial stress, few governments cease to operate. A government facing substantial doubt regarding the ability to continue as a going concern may be different from a government that is facing severe financial stress.

This survey is a part of GASB research that is intended to gather feedback on these broad questions:

- What criteria might achieve the objective of disclosing severe financial stress uncertainties with respect to governments?

- What information do financial statement users need with respect to the disclosure of severe financial stress uncertainties?

- Are the going concern indicators currently presented in note disclosures appropriate for state and local governments under severe financial stress?

About You

This background information is requested to assist in the analysis of survey responses and will be used for internal GASB purposes only. Responses to this survey will be considered anonymous and will not be attributed to specific individuals or organizations.

A.1. Your name:

A.2. Your email address:

A.3. Your title:

A.4. Your employer:

A.5. What type of organization do you currently work for?

- ❍ Rating agency
- ❍ Mutual fund
- ❍ Private wealth management
- ❍ Other buy-side
- ❍ Sell-side
- ❍ Bond insurance/credit enhancement
- ❍ Commercial bank—investing
- ❍ Commercial bank—direct lending
- ❍ Public finance advisor
- ❍ Academic—accounting
- ❍ Academic—other than accounting
- ❍ Legislator or legislative staff—state
- ❍ Legislator or legislative staff—county
- ❍ Legislator or legislative staff—local
- ❍ Oversight entity
- ❍ Research organization
- ❍ Citizen/taxpayer group
- ❍ Private citizen
- ❍ Other (please describe: _____)

A.6. What types of governments are you interested in (or are associated with in other than a preparer or auditor capacity)?

- ❍ States, counties, cities, other localities, taxing districts, and/or school districts
- ❍ Colleges/universities, toll roads, hospitals, utilities, airports, mass transit, and/or other governments that charge a fee for service (business-type activities)
- ❍ Some or all of both groups of governments
- ❍ Neither, I am not interested in or associated with governments (proceed to exit survey with notice that survey is for those who analyze governments only)

❍ Other (please explain: _____)

Part One: Indicators of Severe Financial Stress

This part of the survey focuses on the effectiveness of the categories of indicators below in identifying governments that are facing severe financial stress. A variety of indicators can be used to evaluate severe financial stress in state and local governments and many of these indicators are similar in nature.

For purposes of this survey, indicators of severe financial stress with similar characteristics are grouped into broad categories. Each category includes several ratios that could be used to evaluate a government's risk of severe financial stress. The categories include:

- Financial position
- Liquidity
- Solvency
- Debt burden
- Liability burden
- Economic and demographic factors
- Other factors

Financial Position

Financial position may be defined as a government's financial status at a given point in time (typically the end of a fiscal year). Government-wide and enterprise fund net position and governmental fund balances can provide information about a government's financial position, as well as annual change in net position and fund balances.

Examples of ratios to evaluate a government's financial position include:

Government-Wide and Enterprise Funds Ratios

Unrestricted net position as a percentage of revenues	=	Unrestricted net position ÷ Revenues
Surplus or (Deficit)	=	(Revenues – Expenses) ÷ Revenues
Percentage change in net position	=	Change in net position ÷ Beginning net position

Governmental Funds Ratios

Fund surplus or deficit as a percentage of revenues	=	(Revenues – Expenditures) ÷ Revenues
Unassigned & assigned fund balance as a percentage of revenues	=	Unassigned + assigned fund balance ÷ Revenues
Unassigned & assigned fund balance as a percentage of expenditures	=	Unassigned + assigned fund balance ÷ Expenditures

1. How important is financial position (as defined above) to your assessment of whether a government is in severe financial stress?

Not important at all									Very important	Unsure
❍ 1	❍ 2	❍ 3	❍ 4	❍ 5	❍ 6	❍ 7	❍ 8	❍ 9	❍ 10	❍

[If they answer 6 or higher]

1a. What ratios do you use to assess financial position? (Please present the equation(s) you use, rather than the title(s).)

Liquidity

Liquidity may be defined as a government's short-term ability to meet financial obligations.

Examples of ratios to evaluate a government's liquidity include:

Government-Wide and Enterprise Funds Ratios

Current ratio	=	Current assets ÷ Current liabilities
Quick ratio	=	(Cash + Short-term receivables) ÷ Current liabilities

Governmental Funds Ratios

Cash solvency	=	(Cash + Investments) ÷ Liabilities
Fund balance ratio	=	Unassigned fund balance ÷ Expenditures

2. How important is liquidity (as defined above) to your assessment of whether a government is in severe financial stress?

Not important at all									Very important	Unsure
❍ 1	❍ 2	❍ 3	❍ 4	❍ 5	❍ 6	❍ 7	❍ 8	❍ 9	❍ 10	❍

[If they answer 6 or higher]
2a. What ratios do you use to assess liquidity? (Please present the equation(s) you use, rather than the title(s).)

Solvency

Solvency may be defined as a government's long-term ability to meet financial obligations.

Examples of ratios to evaluate a government's solvency include:

Government-Wide and Enterprise Funds Ratios

Long-term cash solvency	=	(Cash + Investments) ÷ Total liabilities
Net position ratio	=	Unrestricted net position ÷ Total liabilities

3. How important is solvency (as defined above) to your assessment of whether a government is in severe financial stress?

Not important at all									Very important	Unsure
❍ 1	❍ 2	❍ 3	❍ 4	❍ 5	❍ 6	❍ 7	❍ 8	❍ 9	❍ 10	❍

[If they answer 6 or higher]
3a. What ratios do you use to assess solvency? (Please present the equation(s) you use, rather than the title(s).)

Debt Burden and Liability Burden

Debt burden may be defined as the amount of a government's debt outstanding. More broadly, liability burden may be defined as the amount of a government's liabilities outstanding. Ratios of debt burden and liability burden measure a government's ability to afford the issuance of additional debt or the incurrence of additional liabilities.

Examples of ratios to evaluate a government's debt burden include:

Government-Wide and Enterprise Funds Ratios

Debt per capita	=	Outstanding debt ÷ Population

Enterprise Funds Ratios

Debt service coverage	=	(Net operating revenues + Debt service on revenue bonds) ÷ Debt service on revenue bonds
Times-interest-earned	=	(Net operating revenues + Revenue bond interest expense) ÷ Revenue bond interest expense

Governmental Funds Ratios

Debt service burden	=	Debt service ÷ Total expenditures for general, special revenue, and debt service funds
Debt load	=	Debt service ÷ operating revenues

4. How important is debt burden (as defined above) to your assessment of whether a government is in severe financial stress?

Not important at all									Very important	Unsure
❍ 1	❍ 2	❍ 3	❍ 4	❍ 5	❍ 6	❍ 7	❍ 8	❍ 9	❍ 10	❍

[If they answer 6 or higher]
4a. What ratios do you use to assess debt burden? (Please present the equation(s) you use, rather than the title(s).)

Examples of ratios to evaluate a government's liability burden include:

Government-Wide and Enterprise Funds Ratios

Long-term liabilities burden	=	Long-term liabilities ÷ Assessed valuation [or population]

5. How important is liability burden (as defined above) to your assessment of whether a government is in severe financial stress?

Not important at all									Very important	Unsure
❍ 1	❍ 2	❍ 3	❍ 4	❍ 5	❍ 6	❍ 7	❍ 8	❍ 9	❍ 10	❍

[If they answer 6 or higher]
5a. What ratios do you use to assess liability burden? (Please present the equation(s) you use, rather than the title(s).)

Certain events related to debt and liabilities, in addition to ratios, may be helpful in assessing whether a government is in severe financial distress.

6. Which financial events associated with a government's debt burden and liability burden are relevant in evaluating whether the government is in severe financial stress? (*Check all that apply*.)

❍ Default in payment of principal or interest
❍ Downgraded bond rating
❍ Material noncompliance with debt covenants
❍ A guarantor has made payment associated with the government's financial obligations
❍ Other (please describe)

Economic and Demographic Factors

7. What five economic or demographic factors do you consider important to assessing whether a government is in severe financial stress? Rank the selection 1 through 5, with 1 being most important:

1. _____
2. _____
3. _____
4. _____
5. _____

Other Factors

8. What other factors not addressed thus far in this survey, if any, do you consider important to assessing whether a government is in severe financial stress? Rank the factors 1 through 5, with 1 being most important:

1. _____
2. _____
3. _____
4. _____
5. _____

Relative Importance of Indicators of Severe Financial Stress

9. Rank from 1 to 7 the categories of indicators discussed thus far based on how important they are to your assessment of whether a government is in severe financial stress, with 1 being most important:

___ Financial position
___ Liquidity
___ Solvency
___ Debt burden
___ Liabilities burden
___ Economic and demographic factors
___ Other factors

Disclosure of Severe Financial Stress

10. If a government concludes it is in severe financial stress, what information do you believe should be disclosed in the notes? (*Check all that apply*.)

❍ Explanation of how the severe financial stress was identified
❍ Specific financial ratios that indicate severe financial stress
❍ Environmental factors leading to the severe financial stress determination
❍ Management's plan to remediate the severe financial stress
❍ Other (please describe)

10a. How would you use that information? (Please be as specific as possible.)

Part Two: Going Concern Disclosures

GASB standards require governments to report when there is substantial doubt about their ability to continue to meet their commitments for 12 months beyond the financial statement date—in other words, to continue as a *going concern*. If there is substantial doubt, the notes to the financial statements should include the following, as appropriate:

a. Pertinent conditions and events giving rise to the assessment of substantial doubt about the government's ability to continue as a going concern for a reasonable period of time

b. The possible effects of such conditions and events

c. Government officials' evaluation of the significance of those conditions and events and any mitigating factors

d. Possible discontinuance of operations

e. Government officials' plans (including relevant prospective financial information)

f. Information about the recoverability or classification of recorded asset amounts or the amounts or classification of liabilities.

11. Have you evaluated a government's financial statements that contained a going concern note disclosure?

❍ Yes [to 12]
❍ No [to 14]
❍ Unsure [to 14]

12. How valuable is information in the notes about substantial doubt regarding a government's ability to continue as a going concern to your analysis, decision making, or assessments of accountability?

Not valuable at all				Very valuable	
❍ 1	❍ 2	❍ 3	❍ 4	❍ 5	Unsure ❍

[If they answer 1 or 2 or 3 or Unsure]

12a. How could the information in the notes about substantial doubt regarding a government's ability to continue as a going concern be made more valuable, if at all? (Please be as specific as possible.)

[If they answer 4 or 5]

12b. How do you use the information in the notes about substantial doubt regarding a government's ability to continue as a going concern? (Please be as specific as possible.)

13. Is the period of "12 months beyond the financial statement date" appropriate for the evaluation of a government's ability to continue as a going concern?

- ❍ Yes [to 14]
- ❍ No, 12 months beyond the financial statement date is too short [to 13a]
- ❍ No, 12 months beyond the financial statement date is too long [to 13a]

13a. What length of time would be most appropriate for the evaluation of a government's ability to continue as a going concern? Why?

Other Comments

14. If you have other comments about indicators of severe financial stress, governments in severe financial stress, or going concern, please feel free to include them here.

The survey is complete. Thank you for participating in the GASB's research. You can review information about the status of this research activity on the GASB website at http://www.gasb.org/cs/ContentServer?c=GASBContent_C&pagename=GASB%2FGASBContent_C%2FProjectPage&cid=1176166904641. This page of the website is updated on a regular basis.