# Assessing the Relationship Between Objective and Subjective Measures of Fiscal Condition Using Government-Wide Statements

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Government Accounting Standards Board (GASB) Statement 34 has been in effect for a decade yet there is limited research examining government-wide financial reporting data. This study builds on our ability to delve into the fiscal condition of Wisconsin counties during the Great Recession. The principal aims of the research are: (1) expand on works utilizing GASB 34 reporting requirements; (2) report on county administrators perceptions of fiscal condition; and (3) examine the relationship between subjective and objective measures of fiscal condition. We find little evidence that objective fiscal condition indices are related to subjective administrative assessments of fiscal condition.

## INTRODUCTION

After more than 15 years of discussion, in June 1999, the Government Accounting Standards Board (GASB) adopted GASB Statement 34, Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments. This new requirement transformed audit reporting. The most significant changes in Statement 34 include the provision of a Management, Discussion and Analysis section where the governing body provides a description of its fiscal position, a comparison of the adopted budget to the final amended budget, placing a value on government assets such as property, roads, sewerage systems, etc., and government-wide financial reporting. Given the scale of these changes, adoption was phased in over several

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years. The largest state and local governments (total revenues exceeding $100 million) were required to adopt GASB 34 changes for fiscal year 2002, the following year adoption was required for those state/local governments with total revenues between $10 million and $100 million, and fiscal year 2004 adoption was required for those less $10 million in total revenues (Gauthier 2000).

This new layer of financial reporting—government-wide statements—is unique to government financial reporting and focuses on uniformity. Uniformity is pursued in two ways: first, reporting must be done on an accrual basis versus varying accounting methods based on fund type; and second, the reports delineate between governmental activities and business-type activities. The expectation of GASB is that it should now be possible to more easily compare government financial statements.[1]

Mead (2012) emphasizes these points and asserts that commonly used measures of fiscal condition that are not based on Statement 34 are "[…] inherently flawed in several ways due to problems with financial reporting information […]" (91). The shortcomings, according to Mead are:

> First, the focus of these approaches is almost exclusively on budgetary and short-term information. This is because governmental accounting standards did not require reporting of long-term debts and capital assets related to governmental activities… Second, analysis generally was limited to certain segments of government (most often, the governmental funds or just some special revenue funds) and did not contemplate the overall fiscal health of the government… Third, assertions of being able to compare governments were undermined by flexibility in the accounting standards and resulting variation in financial reporting across governments (91–92).

Given the potential of these new financial statements, there has been surprisingly little research exploring the utility of using government-wide statements to examine fiscal condition. Interesting, what little research that has been done supports the notion that these statements can influence the fiscal health of government through Moody's and Standard and Poor's credit ratings (Johnson, Kioko, and Hildreth 2012). Johnson, Kioko, and Hildreth found that several measures from the government-wide reporting (total primary government expenditures financed by business-type revenues, and total primary government revenues) were associated with state credit rating levels. This result is consistent with other studies that seek to better understand how financial conditions influence credit ratings (e.g., Stallmann et al. 2012). Additional evidence supporting the benefits of government-wide statements was reported by Wang, Dennis, and Tu (2007), who developed state-level fiscal condition ratios from government-wide financial statements to assess the extent to which the metrics are related to a set of socioeconomic variables. The authors conclude, "[…] government-wide information required by Statement No. 34 provides a useful reporting framework to evaluate the financial condition of a government" (Wang, Dennis, and Tu 2007, 20).

While there is an abundance of scholarship on local government financial condition measurement using fund statements (Advisory Commission on Intergovernmental Relations

1. This assumes that governments are accurate in their financial reporting, which Modlin (2012) finds is not always the case in North Carolina counties.

1971; Brown 1993; Hendrick 2004; Honadle, Costa, and Cigler 2004; Nollenberger 2004; Kloha, Weissert, and Kleine 2005; Maher and Nollenberger 2009; Maher and Deller 2011), there is limited investigation of the use of government-wide statements for similar purposes. Chaney (2005), building on her work with Mead and Schermann (2002), presents a case study where six measures of financial condition are described using government-wide statements. These six indicators are presented for each type of reporting; government-type activities, business-type activities, and total governmental activities, for a total of 18 indicators. The emphasis of this work is on describing the benefits in using government-wide statements for financial condition analysis and the ratio calculations (see Table 1).

Mead (2006) offers a blending of government-wide and fund-based metrics. Mead's ten indicators capture financial metrics similarly offered by Chaney, Mead, and Schermann (2002) plus indicators for revenues and capital assets. Mead observes that incorporating government-wide metrics in the assessment of financial condition is particularly important given changes in the financial reporting environment (2006). For instance, GASB Statement No. 54 now requires the inclusion of Other Post-Employment Benefits (OPEBs) as a long-term liability. This liability is captured in government-wide long-term liabilities, but not in the fund statements.

The need to shift away from general fund focused reporting has also been exacerbated with the growth in tax–expenditure limitations (TELs) such as Colorado's Taxpayers' Bill of Rights (TABOR) (McCabe 2000; Carr 2006). Today, 46 states have some form of tax and/or expenditure limitation imposed on local governments (Amiel, Deller and Stallman 2009). In attempts to circumvent these TELs local governments have employed a number of strategies including movement away from general taxes to user fees (Skidmore 1999) and/or created special purpose districts (Carr 2006). These may be reported in the general fund, but are more often not, and therefore best captured in government-wide statements. According to Wang, Dennis, and Tu, "[…] fund-level data […] reflects only a fraction of an organization's overall financial condition" (2007, 5). They state further that fund-based accounting is most problematic for larger organizations such as states and counties.

In summary, what we know about government-wide financial statements to date is that they: (1) are required for all GASB complaint audit reports; (2) are intended to provide for better financial comparisons across organizations; and (3) have been shown to be linked to state-level economic measures (Wang et al. 2007), and state bond ratings (Johnson, Kioko, and Hildreth 2012). We take a further step down the path of evaluating information presented in government-wide statements by analyzing the relationship between financial condition and self-reported measures of fiscal health provided by county administrators.

This research addresses four existing gaps in the literature. First, we move the research on financial condition analyses away from fund-based reporting to more comprehensive and consistently reported government-wide statement data. Second, we focus our unit of analysis on counties, which have been virtually ignored in both the financial condition literature and government-wide statement analyses. Third, current literature examining the relationship between objective and subjective assessments of financial condition is limited, at best. Finally, we have the unique opportunity to examine financial condition at the peak of one of the worst recessions since the 1930s. These questions are particularly important as there is speculation about the costs and

**TABLE 1**
**Approaches to Fiscal Condition Measurement Using Government-Wide Statements**

| | Chaney, Mead, and Schermann | Dean Michael Mead | Johnson, Kioko, and Hildreth |
|---|---|---|---|
| Financial position | Unrestricted net assets | Unreserved general fund balance | Unrestricted net assets |
| | Expenses | General fund revenues | Expenses |
| Financial performance | Change in net assets | Change in governmental activities net assets | Change in net assets |
| | Total net assets | Total governmental activities net assets | Total net assets |
| | General revenues ± transfers | | Current assets |
| | Expenses | | Current liabilities |
| | | | Program revenues |
| | | | Expenses |
| Liquidity | Cash ± current investments ± receivables | General fund cash ± investments | |
| | Current liabilities | GF liabilities—GF deferred revenues | |
| Solvency | Long-term debt | Primary government liabilitites—deferred revs | |
| | Assets | Primary government revenues | |
| | Change in net assets ± interest expenses | | |
| | Interest expenses | | |
| Revenues (A) | | Primary government operating grants and contributuions ± unrestricted aid | |
| | | Total primary government revenues | |
| Revenues (B) | | Net (expense) revenue for governmental activities | |
| | | Total governmental activities expenses | |

(*Continued*)

**TABLE 1 (Continued)**

| Chaney, Mead, and Schermann | Dean Michael Mead | Johnson, Kioko, and Hildreth |
|---|---|---|
| Debt burden | Total outstanding debt for the primary government | |
| | Population | |
| Coverage (A) | Debt service | |
| | Noncapital governmental funds expenses | |
| Coverage (B) | Enterprise funds operating revenue ± interest expense | |
| | Interest expense | |
| Capital assets | Ending net value of primary governmental capital assets-beginning value | |
| | Beginning net value | |

| | Wang, Dennis, and Tu |
|---|---|
| Liquidity | Cash ± cash equivalents ± investments |
| | Current liabilities |
| Liquidity | Cash ± cash equivalents ± investments ± receivables |
| | Current liabilities |
| Financial performance | Current assets |
| | Current liabilities |
| Financial performance | Total revenues |
| | Total expenses |
| Financial position | Total surpluses (deficits) |
| | Population |
| Financial position | Restricted and unrestricted net assets |
| | Total assets |

(*Continued*)

**TABLE 1 (Continued)**

| | |
|---|---|
| | **Wang, Dennis, and Tu** |
| Long-term liability (long-run solvency) | Long-term (noncurrent) liabilities |
| | Total assets |
| Long-term liability (long-run solvency) | Long-term (noncurrent) |
| | Liabilities population |
| Tax (service solvency) | Total taxes |
| | Population |
| Revenue (service solvency) | Total revenues |
| | Population |
| Expenses (service solvency) | Total expenses |
| | Population |
| | **Johnson, Kioko, and Hildreth** |
| Financial performance | Operating revenues |
| | Expenses |
| Revenue (1) | General revenues |
| | Operating revenues |
| Revenue (2) | Charges for services |
| | Program revenues |
| Revenue and service-level solvency | Bus-Tvoe activities revenues |
| | Total government expenses |

benefits of GASB Statement 34 reporting requirements (Auditor, State of MN; Gorenz and Associates 2001) and there is scant literature examining the relationship between scholarly measures of fiscal condition and those that drive policy decisions. To provide insights into these questions we use a sample of Wisconsin counties. Utilizing GASB Statement No. 34-based financial reporting and a survey of county administrators' perceptions of fiscal condition we examine the relationship between subjective and objective measures of fiscal condition.

The study proceeds in five sections beyond these introductory comments. First, we provide some simple background information on Wisconsin counties to offer context for the analysis. Second, we provide a detailed discussion of alternative measures of fiscal condition using GASB Statement No. 34-based reports using Wisconsin counties as an example. We then report on a survey of Wisconsin county officials and their self-reported perceptions of their fiscal conditions. Next, we compare and contrast the government-wide statements-based measures and the survey findings. We close the study with a summary of key findings and directions for where additional work is required.

## WISCONSIN COUNTIES

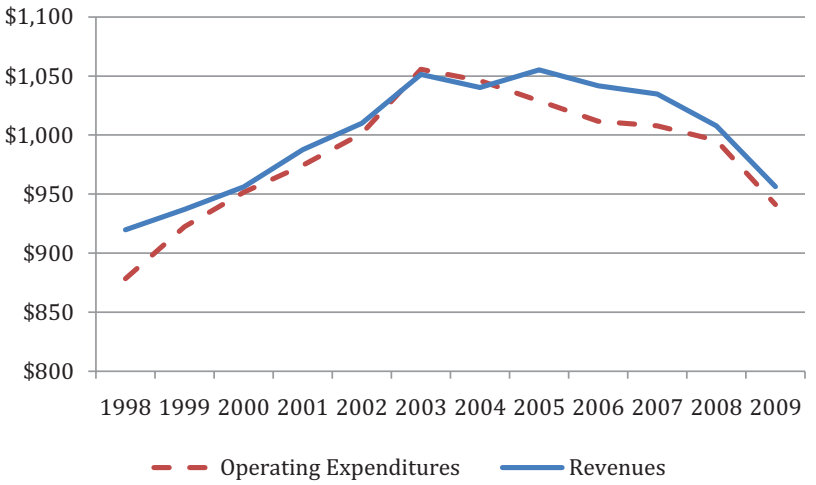
Wisconsin counties are traditional in the sense that they largely serve as an extension of the State by mainly providing health and human services, police/jail and court services, and highway maintenance services. Wisconsin counties also have limited home-rule powers and are generally professionally managed (Maher, Deller and Amiel 2011). From the perspective of generalizability, this analysis should be more reflective of traditional counties than those in the southern and western regions that have experienced expansion in service delivery and home-rule powers (Benton 2003).

For those responding Wisconsin counties, health and human services accounted for 44.3 percent of operating expenditures in 1998, and 39.9 percent in 2009. Public safety also saw little change over the decade; expenses as a percent of total operations were 16.8 percent (1998) and 17.8 percent (2009). Highway and road maintenance was similar as a share of operating expenses varied little during the time period (9.0 and 8.5 percent). On average, Wisconsin counties increased their real per capita expenditures from $878 in 1998 to $1,055 in 2003. Since 2003, the average per capita expenditures of all Wisconsin counties dropped to $941 in 2009.

On the revenue side, Wisconsin counties are primarily dependent on property taxes and intergovernmental aid. As a share of operating revenues, property taxes have grown from 31.8 percent in 1998 to 36.3 percent in 2009. The growth in reliance on property taxes could be function of cuts in intergovernmental aid (43.6 percent of total operating revenues in 1998 and 40.5 percent in 2009), growing property values, inflation and/or tax rate limits. Wisconsin counties also have an optional 0.5 percent sales tax and as of 2009, 61 out of the 72 adopted the tax. As a share of total operating revenues for Wisconsin counties, sales tax collections are relatively small (5.7 percent in 1998 and 6.5 percent in 2009).

When comparing expenditures per capita with per capita revenues, revenues out-paced spending every year except 2003 and 2004 suggesting counties were able to build their reserves for much of the past decade (Figure 1). This occurred even during the 2008 and 2009 recession.

**FIGURE 1**
**Real Mean Expenditure Per Capita Indicator of All WI Counties, 1998–2009**




There is antidotal evidence that counties have built up these reserves in response to uncertainty about property tax levy limits (a form of TEL) and state aids.

Over the past decade, Wisconsin county debt has been stable. The State of Wisconsin caps general obligation (GO) debt at 5 percent of a county's assessed value. In 1998, the mean long-term debt/assessed value indicator was at 0.45 percent, and fell to 0.37 percent in 2009. Wisconsin counties' debt service as a percentage of operating revenues has remained largely unchanged from 2000 to 2009. In 2000, debt service for the average county was 5.1 percent of revenues, it peaked at 6.2 percent in 2003 and was 4.7 percent in 2009.

## MEASUREMENT OF FINANCIAL CONDITION USING GASB STATEMENT NO. 34

We identified seven studies that use government-wide statements for purposes of financial condition assessment (Chaney, Mead, and Schermann 2002; Chaney 2005; Mead 2006; Wang, Dennis, and Tu 2007; Johnson, Kioko, and Hildreth 2012; Mead 2012; Kioko forthcoming). These works are generally consistent in their overall definition of financial condition as, "[…] a governments ability to provide services to meet current as well as future obligations" (Wang, Dennis, and Tu 2007, 3). The metrics offered by the authors attempt to capture similar dimensions of fiscal condition: financial position, financial performance, and service-level capacity.

According to Mead (2012), financial position "[…] is the status of a government's assets, deferred outflows, liabilities, deferred inflows, and net position" (110). Prior to GASB Statement 34, the measurement of assets was relegated to financial and not capital assets. Using fund statements, financial position is often measured in terms of fund balance. This measure has been

expanded with the development of government-wide statements (Chaney, Mead, and Schermann 2002). Johnson, Kioko, and Hildreth (2012) offer two measures of financial position: unrestricted net assets as a percentage of expenses, and change in net assets as a percentage of total net assets for their analysis of credit ratings. Similarly, Chaney (2005) and Chaney, Mead, and Schermann (2002), measure financial position as unrestricted net assets as a percentage of expenses. The operationalization of liabilities has also been expanded to include not only GO debt, but all forms of debt (Mead 2006). Wang, Dennis, and Tu (2007) offer two measures of long-term liabilities, one as a percentage of total assets and the other per capita. The former measure is also offered by Chaney (2005) and Chaney, Mead, and Schermann (2002).

Financial performance appears to be a bit more nebulous both in its definition and measurement. The concept can be thought of in terms of the extent to which assets were gained or lost at the end of the fiscal year. A fund-based analysis typically measures financial performance by comparing general fund revenues to general fund expenditures (Brown 1993; Maher and Nollenberger 2009). With the advent of GASB Statement 34, financial performance can now be broadened to include all assets (Chaney, Mead, and Schermann 2002; Chaney 2005). Chaney, Mead, and Schermann (2002), Chaney (2005), and Johnson, Kioko, and Hildreth (2012) also suggest operationalizing financial performance as the change in net assets as a percentage of total net assets.

Service-level capacity, according to Mead (2012), measures "[…] the government's ability and willingness to meet its commitments to provide services on an ongoing basis" (114). A number of measures have been offered by those studying government-wide statements. Johnson, Kioko, and Hildreth (2012) propose program revenues as a percentage of expenses, and business-type activities revenues as a percentage of total government expenses. While not labeled as such, Chaney (2005) presents a similar measure of service level capacity: general revenues and transfers as a percentage of expenses. Wang, Dennis, and Tu (2007) propose three measures; total taxes per capita, total revenues per capita, and total expenses. This is perhaps the most challenging component of fiscal condition to measure because, according to a panel assembled by GASB, the financial reporting model provides, "[…] little information about service capacity" (Mead 2012, 114).

We are thus left with an array of measures from which to choose for our analysis. Given that our particular interest is in the measurement of county-level fiscal condition and in the utilization of government-wide statements, we opted for five fiscal conditions each calculated for governmental, business, and total activities.[2] The measures include:

- Financial position: unrestricted net assets/expenses.
- Financial performance: change in net assets/total net assets.
- General support rate: (general revenues + transfers)/expenses.

2. Note that Chaney, Mead, and Schermann (2002) provide six measures. We do not include a second measure of solvency ([change in net assets + interest expense)/interest expense] because the authors note most relevant when long-term debt is a problem. Our examination of WI county long-term debt did not find any counties with problematic debt level.

- Liquidity: (cash + current investments + receivables)/current liabilities.
- Solvency: long-term debt/assets.

The secondary-source financial data were collected from fiscal year 2009 county Comprehensive Audited Financial Reports (CAFRs). A total of 55 counties (from a population of 72 counties) were selected based on data availability, including officials' willingness to send copies of the CAFR and responses to our survey of fiscal condition.

### *Financial Position*

As reported by Chaney (2005) and Chaney, Mead, and Schermann (2002), financial position is measured as unrestricted net assets as a percentage of expenditures. This ratio can be calculated for each of the three government-wide reporting activities: governmental (GA), business-type (BA), and total (TA). The intent of this measure is to capture the government's ability to maintain services (Chaney, Mead, and Schermann 2002; Mead 2006; Johnson, Kioko, and Hildreth 2012). The numerator—unrestricted net assets—is akin to a fund balance, whereby it excludes capital assets, commitments to creditors, and restrictions imposed by states or local ordinances (Kioko forthcoming). The denominator is expenses. In the only study that calculated this ratio, state averages in 2009 were −0.016 (GA); 0.1079 (BA); and −0.0074 (TA) (Kioko forthcoming). According to Kioko, "[u]nlike local or smaller governments, states have placed greater restrictions on their net assets; as a result, a number of states report a negative net assets position" (19).

*Government-Type Activities.* The 2009 Wisconsin county ratios are slightly better than those reported by Kioko (Table 2). The average government-type financial position was 0.33 with a standard deviation of 0.24. Green Lake county has the strongest financial position (0.94) and Dane county (−0.13) the worst of those Wisconsin counties reporting in 2009. If treated like fund balance analysis, the financial position of the average Wisconsin county was in a strong position to weather the 2008–2009 recession. In fact, Wisconsin counties appear to be in better shape than cities were in 1989 (see Brown 1993).

*Business-Type Activities.* The financial position of business-type activities has much greater variability than that for government-type activities (standard deviation 2.94 versus 0.24). In fiscal year 2009, the average county's financial position for business-type activities was 0.69, however 12 of the reporting counties reported a negative financial position. Vilas, a county in the northern tip of Wisconsin, had the worst financial position for their business-type activities in 2009 (−0.33). On average, government-type unreserved net assets were nearly three times larger than those for business-types ($14.5 million versus $5.2 million) and average spending was nearly four times greater ($57.1 million versus $15.1 million).

*Total.* Total financial position for reporting Wisconsin counties in 2009 was 0.312 (standard deviation = 0.22). More than half of the counties reported total financial position of 30 percent or more suggesting that most Wisconsin counties are in a strong position to overcome short-term

## TABLE 2
## Government-Wide Fiscal Condition Measures for Wisconsin Counties: FY 2009

| | Governmental activities | | | | | Business-type activities | | | | | Total activities | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Financial position | Financial perform. | General support rate | Liquidity | Solvency | Financial position | Financial perform. | General support rate | Liquidity | Solvency | Financial position | Financial perform. | General support rate | Liquidity | Solvency |
| Three largest (on population) | | | | | | | | | | | | | | | |
| Milwaukee | 0.11 | −0.01 | −0.36 | 1.16 | | −0.02 | 0.02 | −0.09 | 2.15 | | 0.08 | 0.00 | −0.31 | 1.25 | |
| Dane | −0.13 | −0.02 | 0.44 | 1.12 | 0.33 | 0.62 | 0.10 | 0.12 | 5.54 | 0.26 | −0.01 | 0.05 | 0.39 | 1.44 | 0.30 |
| Waukesha | 0.55 | 0.02 | 0.58 | | | 2.11 | 0.00 | 0.00 | | | 0.61 | 0.01 | 0.56 | | |
| Three smallest | | | | | | | | | | | | | | | |
| Pepin | 0.20 | −0.01 | 0.49 | 0.46 | 0.04 | 0.22 | −0.03 | 0.00 | 3.91 | 0.01 | 0.20 | −0.02 | 0.36 | 0.54 | 0.04 |
| Menominee | 0.12 | 0.06 | 0.39 | 1.19 | 0.18 | 0.86 | −0.05 | 0.17 | 4.04 | 0.01 | 0.23 | −0.02 | 0.35 | 1.33 | 0.13 |
| Buffalo | 0.40 | 0.06 | 0.72 | 1.79 | 0.02 | 0.19 | −0.09 | −0.46 | 1.55 | 0.01 | 0.36 | 0.05 | 0.47 | 1.78 | 0.02 |
| Three average | | | | | | | | | | | | | | | |
| Monroe | 0.27 | 0.05 | 0.68 | 1.68 | 0.06 | 0.10 | 0.01 | 0.07 | 1.48 | 0.09 | 0.22 | 0.04 | 0.50 | 1.63 | 0.06 |
| Barron | 0.45 | 0.06 | 0.53 | 1.93 | 0.18 | −0.12 | −0.03 | 0.00 | | | 0.42 | 0.06 | 0.50 | 1.94 | 0.18 |
| Shawano | 0.53 | 0.01 | 0.44 | 2.56 | 0.06 | 0.30 | −0.02 | 0.08 | | 0.06 | 0.46 | 0.00 | 0.34 | 2.78 | 0.06 |
| Mean | 0.33 | 0.00 | 0.52 | 1.69 | 0.14 | 0.72 | −0.01 | 0.06 | 2.70 | 0.15 | 0.31 | 0.01 | 0.42 | 1.69 | 0.14 |
| Median | 0.30 | 0.02 | 0.51 | 1.67 | 0.11 | 0.22 | −0.01 | 0.05 | 1.78 | 0.09 | 0.30 | 0.01 | 0.43 | 1.63 | 0.13 |
| SD | 0.24 | 0.10 | 0.16 | 0.54 | 0.10 | 2.97 | 0.17 | 0.32 | 2.40 | 0.14 | 0.22 | 0.05 | 0.14 | 0.64 | 0.09 |
| Minimum | −0.13 | −0.67 | −0.36 | 0.27 | 0.00 | −0.74 | −0.56 | −1.41 | 0.00 | 0.00 | −0.12 | −0.20 | −0.31 | 0.05 | 0.02 |
| Maximum | 0.94 | 0.10 | 0.75 | 3.55 | 0.38 | 20.67 | 0.59 | 0.91 | 10.56 | 0.52 | 1.02 | 0.08 | 0.69 | 3.94 | 0.38 |

fluctuations in revenues. Two counties reported a negative total financial position (Juneau, −0.12; Dane, −0.01). Marathon county reported the strongest financial position with total unrestricted net assets of $104.9 million ($65.6 million governmental; $39.2 business-type) and total expenditures of $102.4 million.

*Financial Performance*

As noted above, this ratio consists of the change in net assets as a percentage of total net assets. Chaney (2005) and Chaney, Mead, and Schermann (2002) offer this measure of financial performance as an "[…] indicator that focuses on the government's ability to maintain the provision of basic government services" (28). According to Kioko (forthcoming), an important facet of financial condition is change in asset base. While the Kioko's denominator is slightly different (total assets versus net assets), the purpose is the same: did the government add or lose assets? Here, an asset is defined as "resources a government or controls that can be used in provision of services or the generation of other resources to support service provision" (Mead 2012, 121). According to Kioko (forthcoming, 14), "[a]n appropriate return on investment] ROA needs to be at least as high as the rate of inflation, and higher if the organization needs to replace its assets."

*Governmental Activities.* In 2009, 16 of the 53 counties reported negative net assets. The most dramatic was Marquette county with a ratio of negative 67 percent. According to the county's Management Discussion and Analysis, $4.6 million in capital assets were transferred from the governmental activities to business-type activities. While the transfer accounts for a large share of the GA negative change in net assets, there is an unaccounted loss of $1.3 million. Only three of the reporting counties lost assets. For a period in which the nation suffered through its worst recession in 50 years, having only three counties with reported lost assets is encouraging.

*Business-Type Activities.* Of the 50 reporting counties with business-type activities, 15 reported reductions in their net assets greater than the rate of inflation. The most extreme example is Calumet county (−$1.8 million), but that is largely explained by the sale of nursing home with the $1.8 million being transferred to the governmental activities. Considering the state of the economy, it is impressive that just about half of the counties (24) reported some growth in their business-type activities net assets. Interestingly, Marquette county had the largest financial performance ratio in its business-type activities (59 percent). The disparity in financial performance between Marquette county's business- and government-type activities relates, once again, to the sale of its nursing home facility.

*Total.* Given the transfers between funds that occurred, it may be better in this case to assess county's overall operating position. On average, county changes in net assets were positive (0.9 percent); ranging from a high of 8.3 percent (Washington) to a low of −0.20 percent (Iowa). According to Iowa county's audit report, the drop in net assets is due to reductions in income, investment income, fees and charges, and lower capitalized infrastructure costs. Only four (<10

percent) of these counties experienced losses in net assets greater than the year's rate of inflation, consistent with Kioko's assessment of this ratio.

*General Support Rate (General Revenues and Transfers/Expenditures)*

The essence of this measure is to capture the extent to which government services rely on general revenues (those other than fees/charges) to meet expenses. The expectation is that government-type services will largely be funded largely by general revenues (Chaney 2005). This is an interesting metric from the perspective of fiscal condition since Wisconsin counties are largely reliant on state aid to funds health and human services, property taxes, and sales tax receipts. These three revenues have been significantly hit by the Great Recession (Hoene and Pagano 2011). In addition, tax and expenditure limitation research suggests the property tax rate limit imposed on counties by the State will result in a shift toward fees and charges (Skidmore 1999).

*Governmental Activities.* In 2009, the average county funded government-type expenses through taxes, grants and transfers at a rate of 53 percent. Marathon county had the highest general support ratio (75 percent) and Rusk county had the lowest ratio (29 percent). Given that Wisconsin counties have limited home-rule powers and essentially act as extensions of the state (Maher, Deller, and Amiel 2011), it is surprising that nearly half of the average county's government-type activities are funded by fees/charges.

*Business-Type Activities.* As expected, business type activities have a much lower average general support rate (5.8 percent). Marquette's general support rate was highest (91 percent) and is probably, again, a function of the sale of their health-care facility. Manitowoc has a general support rate of −141 percent. According to the county's CAFR, this reflects a transfer in to the governmental activities from the business-type activities fund for the issuance of a GO debt.

*Total.* For this ratio, total activities may be the most useful measure of general support rate because it answers the question, to what extent are all the county' expenditures funded by taxes, grants and transfers? The average total general support rate was 43 percent, with a standard deviation of 10 percent. This suggests that more than half of all Wisconsin county services are funded through user fees and charges.

*Liquidity ([Cash ± Current Investments ± Receivables]/Current Liabilities)*

This ratio captures a county's ability to pay bills when due (Kioko forthcoming; Chaney, Mead, and Schermann 2002; Mead 2006). For the private sector, this ratio should be 2 or greater (Chaney et al. 2002; Kioko forthcoming). Nollenberger (2004) notes, "A liquidity ratio of less than one […] is considered a negative factor" (72). In her examination of states from 2002 to 2010, Kioko found that GA hovering around 2.0. Care must be taken, however, using private sector benchmarks in the public sector because of the fundamental differences in how the two

sectors of the economy function. Still, with the cyclical nature of property tax collections and state aid payments—large shares of county aid—a liquidity ratio at or near 2.0 should ensure limited reliance on short-term borrowing to meet expenses.

*Governmental and Business-Type Activities.* The average Wisconsin county's governmental liquidity was slightly lower than the states (1.7) with little dispersion (standard deviation = 0.53). Kioko (forthcoming) found much greater levels of liquidity among the state's business-type activities (3.4) in 2009. For Wisconsin counties, average business-type liquidity exceeded the private sector norm, but fell below state levels found by Kioko (forthcoming) for the same year (2.7). Compared to liquidity levels for Wisconsin county government-type activities, there is also a much greater rate of dispersion for business-type activities (standard deviation = 2.4). One county reported no cash on hand (Vilas), whereas another reported a liquidity ratio of 10.56 (Oneida).

*Total.* Total liquidity for Wisconsin counties in 2009 was 1.7, the same as the mean for county government-type activities. The average falls just below the suggested ratio of 2.0 (Chaney, Mead, and Schermann 2002). Bayfield county, in northern Wisconsin, had the highest liquidity ratio (3.94) and Racine county had an alarmingly low ratio (0.05). Based on existing research, there does not appear to be much need for concern with average liquidity levels in Wisconsin counties.

### *Long-Term Solvency (Long-Term Debt/Total Assets)*

Long-term solvency is calculated as reported liabilities due in more than one year divided by assets (Chaney, Mead, and Schermann 2002; Wang, Dennis, and Tu 2007). This measure of debt includes all obligations, including but not limited to GO debt. These sets of measures are important because they more accurately capture long-term obligations both in terms of type (more than just GO debt) and source of responsibility (governmental and business type). Given the recent bankruptcy declarations by cities in California (Mammoth Lakes, Stockton, and San Bernardino), Harrisburg, PA; Detroit, MI; and Central Falls, IA, the role of debt in an era of fiscal distress has taken on greater meaning.

*Government, Business-Type, and Total Activities.* For Wisconsin counties, GO debt is limited to 5 percent of equalized property valuation; the statutes do not limit revenue bonds. For governmental activities in 2009, long-term debt averaged 14 percent of total assets with several counties reporting no long-term debt and Racine county reporting long-term debt equal to 38 percent of assets. In 2009, business-type long-term debt equaled 14.9 percent of assets. Juneau county incurred the most business-type debt (52.3 percent of assets). The standard deviation was 13.9 percent. Total county long-term debt averaged 14.2 percent of assets. This is consistent with both government- and business-type debt levels. Wisconsin county debts to assets ratios are much stronger than states, according to Kioko (forthcoming), which in 2009–2010 was 0.233, or nearly 10 percent points higher than the average Wisconsin county.

## MEASUREMENT OF FINANCIAL CONDITION USING OPINION SURVEYS

The relationship between objective measures of fiscal condition using financial reporting data and subjective measures based on self-reported condition is particularly important for researchers as we try to understand how local governments are reacting to fiscal stress caused by the Great Recession. The literature provides an abundance of examples of measures using financial data; however, there is remarkable lack evidence that the metrics matter to decision makers. This is perplexing since a key reason researchers have offered for the development and use of these measures is the expectation that the metrics are used by stakeholders to make informed financial decisions (Lowry and Alt 2001; Honadle, Costa, and Cigler 2004).

Relying on municipal-level survey data from 2007, Maher and Deller (2011) examine the relationship between measures of fiscal stress (per capita total revenues, intergovernmental aid as a percent of total revenues, taxes as a percent of total revenues, deficit as percent of total revenues, GO debt as a percent of equalized value) and local government "subjective" self-reporting of fiscal health for Wisconsin cities and villages. The analysis found little relationship between "objective" and "subjective" measures of fiscal health. Maher and Deller offer three possible explanations: (1) the objective measures of fiscal health are lacking, (2) local officials do not fully understand the state of their fiscal conditions, or (3) local officials act strategically when answering surveys in an attempt to influence policies. While it is difficult to assess the second and third explanations, this study takes us a step toward assessing the first explanation. Specifically, this study incorporates leading fiscal condition metrics identified in the small, but growing, literature using government-wide statements.

### *Survey of Financial Condition*

A web-based survey of fiscal health was administered in July 2010. The email addresses of the 72 chief financial officers were obtained from the Wisconsin Counties Association and standard survey methods were used: an introductory email explaining the intent of the study, followed with an email reminding the financial officers the intent of the study with a link to the survey itself. Three email reminders with links to the survey where provided at five day intervals. Of the 72 counties, 44 county administrative officials (58 percent finance directors, 42 percent administrators/managers) completed the survey. Comparing the counties based on response/nonresponse, the differences are minimal. For instance, responding counties were larger (population 75,569 versus 41,986), had slightly higher per capita property valuation ($96,120 versus $93,731), collected less revenues per capita ($944 versus $1,126), and spent less per capita ($943 versus $1,094).

The survey asked five questions, plus an identifier for the respondent. Question 1 asked respondents to rate the current financial condition of their community on a four-point scale. Question 2 asked, "What are the financial prospects of your county in the next five years" using the same four-point scale. Question 3 asked the county officials to rate their county's financial condition on eight categories (see Table 3). The next question asked respondents to rate the

**TABLE 3**
**Wisconsin County Fiscal Conditions (Percent Response)**

| | Strongly disagree | Disagree | Agree | Strongly agree | Do not know |
|---|---|---|---|---|---|
| Our current fiscal situation is acceptable | 11.4 | 43.2 | 40.9 | 2.3 | 2.3 |
| We are able to maintain three months of operating expenditures with current cash reserves | 11.4 | 11.4 | 52.3 | 25.0 | 0.0 |
| Our current capital improvement plan is fully financed | 28.9 | 40.0 | 28.9 | 2.2 | 0.0 |
| Our current credit rating is acceptable | 2.2 | 0.0 | 60.0 | 35.6 | 2.2 |
| We are near our debt level capacity | 68.9 | 17.8 | 8.9 | 2.2 | 2.2 |
| We have been able to roll over cash reserves from the previous budget cycle | 8.9 | 22.2 | 62.2 | 6.7 | 0.0 |
| We are faced with unfunded pension responsibilities | 37.8 | 44.4 | 15.6 | 0.0 | 2.2 |
| We are able to maintain our current employee benefits package | 4.6 | 52.3 | 40.9 | 2.3 | 0.0 |
| The property tax limit has negatively impacted our fiscal situation | 2.3 | 15.9 | 43.2 | 36.4 | 2.3 |

degree to which they pursued each of 20 identified strategies (six service delivery, five revenues, and nine expenditure options) to cope with fiscal stress. The last question asked county officials to rate the top five strategies pursued from the list of 20 options used in question four. This is the first time these surveys have been administered to county officials for the purpose of documenting viewpoints about their county's current and future fiscal health. We focus on responses to three sets of questions.

*Current Conditions.* When directly asked if their current fiscal condition was acceptable, 11.4 percent "strongly disagreed" and 43.2 percent "disagreed," suggesting that over half of the responding counties are experiencing some level of fiscal stress (Table 3). Only 2.3 percent of respondents "strongly agreed" with the general statement that their current conditions are acceptable. These results are generally consistent with the results of the general ranking question reported in the introductory comments of this study. When we begin to explore specific characteristics of fiscal condition; however, a slightly different situation is apparent. For example, when asked about cash reserves and the ability to cover operating costs, only one in five suggested that they experience difficulties. Indeed, almost three in four were comfortable with their ability to maintain three months of operating expenditures with current cash reserves. In

addition, nearly all respondents indicated that their current credit rating is acceptable and that they have flexibility in incurring additional debt if necessary.

There is some evidence suggesting that some counties could experience more stress than others in the near future. For example, about 7 out of 10 do not have fully financed capital improvement plans. This suggests that the "typical" county will need to either delay capital improvements in the future, divert funds away from general operation expenditures, incur additional debt to make those capital improvements or some combination of all three. In addition, one in three have been unable to carry over cash reserves from the previous budget cycle suggesting that they are either running deficits or budgeting "perfectly" (neither adding to nor subtracting from reserves). Such counties will need to review current cash reserves and capital improvement policies to minimize fiscal stress levels in the future.

Underfunded pension responsibilities do not currently appear to be a problem for counties, but this may be due to the role of the state's retirement system. Over half (56.8 percent) believe that the county will not be able to maintain their current employee benefits package. While the survey is not sufficiently detailed to determine the types of benefits that may be at risk, it is clear that county employees may be facing reductions in benefits in the near future.

Another determinant of fiscal condition is the flexibility of local governments to respond to changing local conditions. This speaks to the institutional rules by which local governments function. Generally, the more flexible the rules, the better positioned local governments are to maintain fiscal health. One constraint that Wisconsin counties have been operating under for a number of years is the limit on the ability of counties to raise the property tax rate to meet local demands. While prior research by the authors of this study has suggested that the strong real estate market has muted the impact of the property tax limit, the collapse of the real estate bubble may make that prior research moot. Falling real estate values and assessed values, coupled with the inability to raise mill rates to compensate, will place county governments under future stress. Four in five county administrators responding to the survey agreed with the statement that the property tax limit has negatively impacted their fiscal situation.

The survey results suggest that few, if any, Wisconsin counties are currently facing a fiscal emergency and a small handful of counties are in an acceptable fiscal position. But the near term future is bleaker. The responses from county administrative officials suggest that the majority of Wisconsin counties will experience severe fiscal stress within the next five years. Prior research on Wisconsin municipalities suggests that the uncertainty of state aid and additional rules that limit local flexibility to raise revenues has caused many local officials in Wisconsin to be very pessimistic about the future (Maher and Deller 2011).

## METHODOLOGY

Given the available survey data and county CAFRs we are able to test the hypothesis that there exists a relationship between self-reported measures of financial condition and secondary source data used to assess financial condition. Furthermore, it may be possible to identify those particular objective measures that most closely align with subject assessments of county fiscal

condition. The objective fiscal condition indicators include the following and were generated for governmental, business-type, and total activities for a total of 15 indicators.

- Ratio of unrestricted net assets to expenses.
- Ratio of change in net assets to total net assets.
- Ratio of general revenues and transfers to expenses.
- Ratio of cash, current investments, and receivables to current liabilities.
- Ratio of long-term debt to assets.

The survey responses described in the previous section were also included, specifically responses to the questions, "Please rate the current financial condition of your county," "What are the financial prospects for your county in the next five years" and responses to eight questions asked using a five category rating. Given the exploratory nature of the analysis, simple bivariate correlations are reported.

## FINDINGS

The results of our analysis measuring the extent to which self-reported "subjective" measures of fiscal condition are related to government-wide indicators of fiscal condition are provided in Table 4. Simple correlations between government-wide measures of fiscal condition (objective) and self-reported measures (subjective) are scattered. Of the 165 possible correlations, only 12 are statistically significant. Of those 12, however, it is worth noting that most of the statistically significant correlations are in the expected direction and identify relationships where we would expect. For instance, both governmental-type and total government measures of liquidity—ability to pay bills—are positively associated with perceptions of future financial condition.

Government-type fiscal condition measures reveal positive relationships between administrators' assessments of their county's future condition and liquidity, and the county's fiscal situation and support rate. The former makes intuitive sense; administrators link their county's fiscal future to their ability to pay bills. The latter relationship also appears plausible given the more stable nature of general tax dollars (largely property taxes), compared to fees/charges, and county fiscal condition.

Business-type fiscal condition indicators had a number of associations with administrators' survey responses. Financial position was positively associated with opinions toward employee benefits packages; the stronger the business-type financial position, the more supportive administrators were toward county employee benefit packages. Perceptions of the current tax limits imposed by the State on counties were negatively associated with financial condition; counties with stronger financial conditions were less concerned with state-imposed tax limits than those administrators in counties with weaker financial positions. Business-type general support rate was positively associated with responses to rollover cash reserves and tax limit effects. In general, county administrators with greater reliance on general fund dollars to support business-type activities had stronger opinions about their county's cash reserves. Interestingly,

**TABLE 4**
**Survey Responses and Government-Wide Fiscal Condition Metrics**

| | Current condition | Future condition | Fiscal situation acceptable | Maintain three-month reserves | Financed capital plan | Credit rating acceptable | Debt level | Roll over cash reserves | Pension liabilities | Benefit package | Tax limit effects |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Government-type indicators | | | | | | | | | | | |
| Financial position | 0.224 | 0.125 | 0.257 | 0.214 | −0.063 | 0.207 | 0.180 | 0.248 | −0.023 | 0.102 | −0.074 |
| Financial performance | −0.198 | 0.085 | 0.114 | 0.035 | 0.192 | 0.127 | 0.196 | −0.128 | −0.018 | −0.158 | −0.244 |
| Support rate | 0.150 | −0.049 | 0.353** | 0.017 | 0.115 | 0.176 | 0.115 | 0.069 | 0.100 | −0.110 | −0.230 |
| Liquidity | 0.048 | 0.378** | 0.105 | 0.198 | −0.225 | 0.028 | 0.015 | 0.157 | 0.187 | 0.008 | −0.034 |
| Solvency | −0.182 | −0.149 | −0.236 | −0.174 | −0.015 | −0.285 | 0.170 | 0.114 | −0.157 | 0.034 | 0.245 |
| Business-type indicators | | | | | | | | | | | |
| Financial position | 0.268 | −0.111 | 0.168 | 0.051 | 0.182 | 0.279 | −0.111 | 0.138 | 0.192 | 0.442*** | −0.326* |
| Financial performance | 0.017 | −0.173 | −0.212 | 0.033 | −0.123 | −0.156 | −0.161 | 0.245 | 0.017 | 0.220 | 0.036 |
| Support rate | −0.065 | 0.031 | −0.276 | 0.079 | −0.231 | 0.011 | −0.156 | 0.355** | −0.039 | 0.113 | 0.314* |
| Liquidity | −0.406** | 0.161 | −0.200 | 0.279 | −0.153 | −0.079 | 0.125 | 0.141 | −0.055 | −0.431** | −0.053 |
| Solvency | 0.032 | −0.121 | 0.057 | −0.134 | 0.070 | 0.188 | −0.265 | −0.120 | 0.174 | 0.000 | 0.145 |
| Total government indicators | | | | | | | | | | | |
| Financial position | 0.303* | 0.036 | 0.258 | 0.311* | −0.068 | 0.229 | 0.135 | 0.384** | 0.085 | 0.124 | −0.062 |
| Financial performance | 0.014 | −0.064 | −0.054 | 0.075 | 0.173 | 0.198 | 0.174 | −0.230 | −0.138 | −0.064 | −0.258 |
| Support rate | 0.167 | −0.133 | 0.180 | 0.055 | 0.137 | 0.139 | 0.098 | 0.185 | 0.235 | −0.032 | −0.225 |
| Liquidity | −0.021 | 0.345** | 0.055 | 0.194 | −0.329 | 0.079 | 0.073 | 0.130 | 0.050 | −0.106 | −0.042 |
| Solvency | −0.162 | −0.163 | −0.152 | −0.209 | 0.032 | −0.217 | 0.109 | 0.048 | −0.066 | 0.040 | 0.232 |

counties with those business-type funding patters had more positive attitudes toward state-imposed tax limits. This relationship appears a bit counter-intuitive. Finally, business-type liquidity was negatively associated with perceptions of county current condition and benefits packages. These relationships also appear a bit counter-intuitive.

The third set of results is of total government county financial condition and administrator perceptions. Total financial position is positively associated with opinions of current condition, ability to maintain three months of reserves and ability to roll over cash reserves. Given that financial condition measures reserves relative to spending, it is encouraging to find these associations. The findings also suggest that administrators are considering both government- and business-type activities when assessing current condition and reserves. The other statistically significant relationship was that between liquidity and future condition, a relationship similar to that found for government-type liquidity.

## SUMMARY

This was the first known attempt to examine government-wide financial statements at the sub-state level. We examined these financial statements at the height of the Great Recession (FY 2009) from the perspective of administrators' self-assessment of their county's financial condition. While we have reservations about reading too much into the survey responses, administrators' responses were more consistent with the total government fiscal condition metrics than the government-type indices. This suggests that county administrators were taking into account both general and proprietary funds when responding to the survey questions. In addition, we found associations between perceptions of fiscal condition and important objective measures of fiscal condition, including financial position, liquidity, and support rate that we did not find in our previous work (Maher and Deller 2011).

Despite identifying correlations between objective and subjective measures, the results are not overwhelming. The findings once again leave us pondering if the limited amount of association between subject and objective measures of fiscal condition is a function of measurement error or bias in the manner in which county officers respond to the survey questions. Future research needs to delve into a better understanding the bases upon which administrators and managers assess their organization's fiscal condition. In addition, it is worthwhile pursuing the extent to which these perceptions of fiscal condition vary based on whether you are an elected official, administrator/manager, or finance director. These are important distinctions because each play an important role in establishing policies that affect fiscal condition.

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