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### Fiscal Transparency and Accountability

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MAY 2019

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THE  
CENTER  
FOR  
STATE  
AND  
LOCAL  
FINANCE

# Fiscal Transparency and Accountability

Alex Hathaway

Carolyn Bourdeaux

Emily Franklin

Working Paper 19-12

## **ACKNOWLEDGMENTS**

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# The Center for State and Local Finance

WORKING PAPER 19-12

## Fiscal Transparency and Accountability

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May

2019

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## Introduction

Best practices recommendations in governmental budgeting and financial management often center on improving transparency. The full disclosure of key information about the fiscal health of a government is thought to be critical to ensuring citizen trust in government, reducing corruption and ensuring fiscal stability (Kopits and Craig, 1998). Transparency also creates a level of trust that allows the financial markets around government debt to function properly. Ideas of transparency are grounded in an explicit or intuitive understanding of a principal-agent problem, where the voters or “principals” have a particular need or want a particular product, and the “agents” or governmental actors propose and implement policies to address this need. The challenge in this relationship is that methods used by the agent, and at times even the outcomes produced, may be opaque to the principal, and thus, the principal has difficulty holding the agent accountable (Mueller, 1989).

This principal-agent problem underpins the theory of “fiscal illusion,” where a central theme is that elected officials prefer policies that appear to give voters something for nothing by pushing costs for a public service into the future (Buchanan, 1964) or by devolving costs and accountability to other levels of government (Bennett and DiLorenzo, 1983; Fiorina, 1986). The voters believe that they are getting a public service at no additional cost to themselves when in fact they are failing to perceive that they will pay at some point in the future or are paying through an unexpected mechanism, such as local taxes rather than state taxes. The cure for fiscal illusion is more information so that voters can hold elected officials and government agencies – the agents – accountable.<sup>1</sup>

This paper draws on data from fiscal years (FY) 2015-17 collected as part of the Volcker Alliance’s Truth and Integrity in Government Finance project, which reviews fiscal transparency and financial management practices across the states. The project studies whether states have structural deficits that are patched through short-term solutions, pushing hard decisions into the future (and giving voters the illusion of “something for nothing”), and further, examines the extent to which this is visible through existing documentation. This analysis draws on the 29-question Volcker Alliance survey and supplements this material with additional research on the states to study whether states report structural deficits directly or at least provide the basic pieces of an analysis that would allow citizens to assess long-term structural deficits

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<sup>1</sup> Bourdeaux (forthcoming) has raised the issue that the problem might not be fiscal illusion per se but that human beings generally are biased towards current consumption, and as such, voters might be complicit in efforts to push costs into the future. Behavioral economics documents a number of cases of such behavior. However, people may develop commitment devices to protect their future selves from their current selves. One way of thinking about this dilemma concretely is to consider whether GASB rules encouraging states to disclose future liabilities such as pension and OPEB liabilities will prove sufficient inducement to states to address these issues (this would be the fiscal illusion answer) or do states need concrete laws limiting such liabilities, as states have long done with debt liability, to force their current selves to be disciplined about future costs (a behavioral economics answer). Rating agencies and reports such as the Volcker Alliance project might also be beneficial not only for transparency but also because they create current penalties through loss of state “reputation” for engaging in practices that have long-term costs.

independently. We conclude that the basic analyses are not in place to assess effectively whether states face a long-term structural deficit. Although most states provide current and past year information about state expenditure obligations and revenue streams, this information can be difficult to find and assemble. For the most part, the states generally do not produce serious forecasts documenting expenditure and revenue trends, much less forecasts that incorporate the impact of long-term liabilities on future state operations.

## Literature Review

Research on transparency at the state level is sparse. The published literature primarily examines the concept at a country or global level with limited information concerning state-level government in the United States. The extant literature discusses the merits and effects of transparency as well as the possible pitfalls and also considers the conditions that warrant more transparency in government. Efforts to measure the effects of transparency also receive considerable attention, and several groups have organized guidelines to help governments, mostly at the national level, become more transparent.

### **POTENTIAL BENEFITS OF TRANSPARENCY IN GOVERNMENT**

Much of the research espouses the potential benefits of transparency. Improved fiscal performance is often seen as the central goal of a transparent government, and the research proposes several reasons why this may occur (Arbatli and Escolano, 2015; Bastida and Benito, 2007; Kopits and Craig, 1998). Open information can provide the public a means to impose fiscal discipline on elected officials (Benito and Bastida, 2009; Heald, 2003). With stricter fiscal discipline and clear accounting for revenues, expenditures, and liabilities, officials can be held accountable for policy decisions with less room for blame-shifting (Heald, 2003). Improved accountability may also reduce governmental corruption (Bastida and Benito, 2007; Heald, 2003; Khagram, de Renzio and Fung, 2013).

A transparent government would make it easier to identify favors or special treatment that politicians may afford special interest groups and help reduce inequities in fiscal practices (Garrett and Vermeule, 2006; Kopits and Craig, 1998). Additionally, a transparent budget and auditing process may reduce the likelihood political actors resort to fiscal gimmicks or tricks to manipulate the budget and, instead, shift attention to outcomes and performance (Benito and Bastida, 2009).

Another set of benefits concern state debt and liabilities. Several studies in the literature have suggested that open government operations may improve credit ratings (Arbatli and Escolano, 2015; Hameed, 2011). A closely related observation is that by making their assets and liabilities more accessible, states may find it easier to borrow money at lower interest rates (Hameed, 2011; Khagram, de Renzio and Fung, 2013). Furthermore, by shedding light on the status of long-term liabilities, politicians may be pressured into funding these liabilities to reduce the future



burden on the state (Polackova Brixi and Schick, 2002). The public can also benefit from more transparent pension plans, as beneficiaries would be able to monitor and optimize their portfolios more easily (Novy-Marx and Rauh, 2009).

The research also proposes more intangible effects of transparency. By removing the shroud of secrecy and allowing the public to see how their taxes are used, transparency would be able to redeem the public's trust in the government (Linden, 2010). An empirical study by Alt and Lowry (2010) has shown that transparency helps reduce the likelihood that politicians are not reelected after they introduce tax increases. Additionally, transparency can better involve the public and spur the people's interest in becoming more active in the political process (Benito and Bastida, 2009).

### **POTENTIAL DRAWBACKS OF TRANSPARENCY IN GOVERNMENT**

Although the literature describes numerous potential benefits of governmental transparency, several authors have raised concerns about unchecked increases in transparency. Beyond obvious concerns about the upfront costs associated with the time, labor, and capital needed to make a government more transparent (Bertot, Jaeger and Grimes, 2010; Heald, 2003; Linden, 2010), misinterpretation of information is a potential drawback. The media is a related source of concern. Negative news tends to be reported more prominently than positive news, which can portray the government as more incompetent than it may be in reality (Heald, 2003). Media scrutiny is often unforgiving and can generate unrealistic expectations about how government can and should be run (Linden, 2010). Ultimately, this level of transparency and criticism can affect politicians' decision-making abilities, making them less likely to put things in writing or pursue alternative options that may be perceived negatively by the press or public.

Misinterpretation can also happen in other ways. Heald (2003) uses the example of the common need to bundle policy announcements, where confidentiality can be beneficial to reduce the chance of individual pieces of information being misconstrued out of context. Particularly with computer-based transparency, information can be misinterpreted because the data is often quantitative and the context may be ambiguous; it may be difficult to understand the data fully without speaking to an individual within the agency (Meijer, 2009).

Finally, transparency may have the unintended side effect of making the government vulnerable to powerful interest groups (Heald, 2003). As Rose and Smith (2011) attest, "while individual citizens face virtually insurmountable hurdles to collective action, mobilized groups seeking transfers to narrowly defined economic interests are well situated to take advantage of available information." In this context, more transparency would harm the public interest overall (Garrett and Vermeule, 2006).

### **DETERMINANTS OF FISCAL TRANSPARENCY**

As one would imagine, undesirable fiscal outcomes are often the impetus to increase transparency in governmental financial operations (Alt, Lassen and Rose, 2006; Khagram, de

Renzio and Fung, 2013). Economic crises in particular can bring the need for transparency to the forefront of political discussions and can quickly affect change. Similarly, corruption cases can bring the issue quickly to the public's attention. Studies also show that increased partisanship or political polarization prompts legislatures to pass transparency policies, as politicians bind the hands of their opposition, as well as their own (Alt, Lassen and Rose, 2006; Khagram, de Renzio and Fung, 2013).

### **TRANSPARENCY MEASUREMENTS**

Measuring transparency and its effects has proved challenging. Heald (2003) has described the difficulty in pinpointing direct effects because of the "level of abstraction which does not make it clear what the 'objects' of transparency are"; in particular, there is no consensus regarding what constitutes "effectiveness." Nonetheless, several indices have been created to measure levels of transparency (Benito and Bastida, 2009; Heald, 2003; Kopits and Craig, 1998; Von Hagen, 1992). One of the most prominent indices, the Open Budget Index, was created by the International Budget Partnership to assess national-level transparency data based on eight budget documents: the pre-budget statement, executive budget proposal, enacted budget, in-year report, mid-year report, year-end report, audit report and citizens budget (Khagram, de Renzio and Fung, 2013). The pre-budget statement describes the economic assumptions used in budget development as well as the anticipated revenues, expenditures and debt levels; the citizens budget presents a shortened, easily readable and accessible version of the other seven documents.

At the state level, Alt, Lassen and Rose (2006) adapted a transparency index to evaluate budget procedures. The index consists of nine items that can be written as questions and presented to state budget officers as a survey. The questions address the characteristics of revenue and expenditure forecasting, the use of generally-accepted-accounting principles, the formation of appropriations bills, the type of budget cycle and the presence of performance measures. The responses are translated to a numerical scale and added together, with a higher index score indicating more transparent budget procedures.

### **BEST PRACTICES**

Several large organizations have published best practices guides for fiscal transparency (Benito and Bastida, 2009; IMF, 2014; OECD, 2002; Ramkumar and Shapiro, 2010). For the International Monetary Fund, Kopits and Craig (1998) define three dimensions of good practice: institutional transparency, accounting transparency and transparency of indicators and projections. The Organisation for Economic Co-operation and Development's (OECD) Best Practices for Budget Transparency Report (2002) details specific information that should be made available to the public in numerous documents. The suggestions include commentaries on revenue and expenditure data, the economic assumptions used in making projections, comparative revenue and expenditure data for previous fiscal years, multi-year forecasts, and comprehensive looks at assets compared to long-term liabilities. The OECD also promotes a pre-election report that the public can use to gauge the status of the government's finances accurately before an election.

In sum, while the literature is inconclusive about the benefits or object of transparency, oversight or coordinating institutions that promote best practices in public finance—such as the OECD—have forged ahead with promoting its importance and in recent years have paid increasing attention to driving up transparency around long-term fiscal health, which is more difficult to discern from existing fiscal documents. Component parts of understanding long-term fiscal health include 1) actual provision of the information, 2) ease of access and 3) presentation of the information for people with non-expert levels of financial literacy.

## Methodology

This analysis draws on data from the first year of the Volcker Alliance project to assess whether state governments in the United States provide information on long-term fiscal health in a way that is easily accessible to the average citizen. As part of the project, twelve universities across the country gathered fiscal information from all fifty states, grounded in a 29-question survey. Key questions that informed this research included the following.

- Structural deficits: Does the state disclose projected structural general fund deficits (recurring revenues that do not cover ongoing expenditures) and other comparable liabilities?

This analysis examines whether states explicitly disclose and evaluate structural deficits as well as what type of data is presented as part of a state’s assessment of a structural deficit. A complete analysis of a structural deficit begins with a long-term forecast. The Center on Budget and Policy Priorities defines “multi-year” as three years beyond the upcoming fiscal year (McNichol and Leachman, 2015). For this paper, we have defined “multi-year” more leniently as three fiscal years beyond the current year, still a difficult threshold for many states to reach. A complete analysis will also use a moderately sophisticated strategy for projecting revenues and expenditures and will incorporate an assessment of one-time revenues and deferred expenditures as well as the impact of long-term liabilities such as pensions, other post-employment benefits, debt and deferred maintenance. The analysis also examines the relative accessibility of this information to the average citizen. Since most states do not provide a complete assessment of a potential structural deficit, the analysis then goes on to assess the extent to which states produce and make accessible the component pieces of such an analysis.

- Multi-year forecasts: Does the state disclose multi-year revenue/expenditure forecasts (at least three years) in the budget documents?

Assuming states do not explicitly discuss a structural deficit, the inclusion of a long-term, multi-year forecast should, in theory, provide a proxy for a structural deficit analysis. Indeed, some of the states we evaluated—such as Georgia—responded that this analysis was where they would report a potential structural deficit.

The Volcker Alliance questionnaire asks whether states explicitly provide a multi-year expenditure and revenue forecast, and our analysis further evaluated whether these would truly reveal a structural deficit. For instance: does the state's revenue and expenditure forecast clearly show the methodology for how the forecast was built? Is this a sophisticated methodology or one that simply applies generic inflation and population factors to current operating expenditures? In particular, are there explanations of big-ticket growth items like Medicaid and education? Does this methodology include a current services assessment or the amount of expenditures required to keep the current service levels constant? This approach in turn would need to include some sort of projection associated with the growth in workload. Does it include an analysis of debt service requirements over time, pension and OPEB liabilities, and deferred maintenance? On the revenue side, does the analysis incorporate an evaluation of tax expenditures that may affect long-term liabilities? Last, is any of this information easy to access and interpret for an average citizen?

While the methodology for the forecast was evaluated by examining budget documents, accessibility was determined initially by a Google search. To make financial documents easily accessible to the public, institutional websites should be arranged in ways that facilitates finding documents using large search engines like Google or Bing. Ultimately, the state's websites should allow as few 'clicks' as possible for a citizen to reach the desired information. We discovered that, for the most part, only the revenue and expenditure forecasts can be found using direct links from Google's search results page by searching for "[state] revenue forecast" or "[state] expenditure forecast/outlook." The results presented below indicate whether a direct link to the forecast appears in the first 10 search results using these search terms. We created an ordinal metric to describe the ease of finding the revenue and expenditure forecasts: 1) easily accessible from Google results; 2) accessible for an average citizen if they have already found the budget documents; and 3) accessible in the budget documents for someone with expert knowledge. "N" indicates that the information is not available in the budget documents.

An example of a "3" value is found in Georgia's multi-year revenue forecast. While the Governor's Budget Report discusses the upcoming fiscal year's revenues in the first few pages, the multi-year revenue forecast is tucked away near the end of the report at the bottom of the multi-year expenditure forecasts (GA OPB, 2017). The odds are good that a layperson would be unlikely to stumble upon this analysis without expert guidance. The major program forecasts also use the 1-2-3-N format because this information is often embedded in the expenditure forecast.

- Long-term liabilities: Was the contribution to public employee pension/OPEB (other post-employment benefits other than pensions) less than 100 percent of the actuarially required or determined amount? Does the state provide tables listing outstanding debt and debt service costs in the budget documentation? Is the estimated cost of deferred infrastructure maintenance disclosed in the budget documentation?

Our final question is the extent to which a state discloses the future implications of critical long-term liabilities such as pensions, OPEB, debt and deferred maintenance. This section draws on the survey questions and further assesses the accessibility of such information. Pension and OPEB liabilities can be complex, and the total liabilities depend on numerous factors. In times of fiscal stress, pension and OPEB obligations may be postponed or payments reduced to lessen the burden in other areas, but these actions only increase liabilities in the future. To understand the true value of these obligations, the budget documents should detail the actuarially required contributions (ARC) and projected contributions into the future, as well as all earnings from investments, assets held and the economic assumptions underlying the projected liabilities, including the assumed discount rates.

While many states include annual debt service payments in the appropriations acts, many do not include a broader view of total debt obligations, an integral part of understanding a state's fiscal health. Providing debt service schedules over time allows individuals to see the trends in the payment schedule: Does the state pay the same amount every year? Does it pay more in the short term and much less in later years? Does the state pay little or nothing in the present and push off much of the debt burden far into the future? None of these questions can be answered easily without the budget documents presenting the debt service over time. As with multi-year revenue and expenditure forecasts, knowing the future liability of debt service allows policymakers to address potential policy and budgetary issues in the present, helping to avoid future difficulties.

Accounting for deferred maintenance also contributes to the full picture of state fiscal health. Deferred maintenance refers to repairs or other maintenance activities that have been pushed off into the future to avoid the expense in the present. Because the postponed expenses will need to be made in the future, not openly accounting for these liabilities leaves the state vulnerable to possibly (more) expensive, unexpected and untimely repairs.

Long-term liability information is difficult to locate using a simple search engine request. We originally performed Google searches following a template of "[state] [topic keywords]" looking for results that link directly to the documents or to closely related pages where the document can be found. For long-term liabilities, our topic keyword search terms included: "debt service/payments/bonds," "retirement pension," "retirement OPEB," "deferred maintenance/repairs." For example, looking for Louisiana pension obligations, we searched for "Louisiana retirement pension." Unfortunately, very few of the long-term obligation searches returned with viable results. We found the best way to gather this material is to locate the budget documents first, particularly the executive budget document, the appropriations act, and potentially relevant legislative session summaries, by navigating the websites of the executive and legislative branches.

It should be noted that long-term obligations are presented in the Comprehensive Annual Financial Reports (CAFR), but these documents are retrospective in nature and often do not provide multi-year projections of long-term obligations or payment plans. The tables below show

how the information is presented in these documents: “F” indicating a forecast of at least three future years is present in the budget documents; “C” indicating only the current or upcoming fiscal cycle’s information is present; and “N” indicating the information is not present in the budget documents. Additionally, with such variation in how states disclose information, particularly legislative reports or session summaries, there are potentially documents that include the previously discussed information we were unable to locate despite our thorough efforts. Nonetheless, if we were unable to locate a document, it is unlikely that the average citizen would find it either, and more clarity in the future presentation of information may still be warranted.

## Results

### STRUCTURAL DEFICITS

As Table 1 below shows, every state has made the effort to implement a transparency website of some kind. While more information may be required for an average citizen to have the full picture of a state’s fiscal health, such a website is a good-faith effort to improve fiscal transparency practices and governmental accountability. Thirteen states disclosed structural deficits in a concrete, systematic way. West Virginia, Maryland and California, for example, disclose potential shortfalls and analyze in detail the causes, future impacts and solutions. West Virginia includes this breakdown prominently in its executive budget document, making it accessible and easily understandable to the general public through its narratives, while Maryland’s analysis is produced through the legislative branch and may be more difficult for the public to locate.

West Virginia describes structural deficits in a detailed six-year financial plan in the executive budget proposal (volume I); it is presented upfront in the executive summary section and updated annually by the State Budget Office (WV SBO, 2016). The proposal also includes sections on long-range issues, revenue sources, debt summaries and economic forecasts, which contribute to the understanding of the structural balance of the state. The six-year financial plan shows the current fiscal health of the state through analyses of revenues and expenditures and then extrapolates them into five future fiscal years while maintaining the current level of services. The forecasting process looks at job growth and demographic changes, compares the state to U.S. national trends and focuses on changes to important drivers of state revenue such as coal and natural gas. West Virginia’s assumptions also consider potential problems mostly centered on demographic issues: the population is aging, unhealthy and declining in number. The revenue forecast is based on data from IHS Economics and incorporates legislative changes affecting revenue streams, such as the FY 2017 diversion of some personal income tax collections to OPEB obligations. On the expenditure side, the state writes in-depth narratives describing the expenditure growth and program changes needed to maintain a current level of services and includes changes to retirement contributions, public education and Medicaid. Each program section takes into account program-specific inflation and legislative changes. Medicaid, for

example, considers the cost of healthcare inflation, changes in enrollment, quickly rising drug costs and cost containment options. The state also adds 2-percent employee raises to the assumptions for the FY 2018-21 forecasts.

West Virginia's executive budget proposal also contains information on long-term liabilities and one-time expenditures. Tax expenditure information is presented in the revenue summaries section, which has tables listing estimated current fiscal year costs of tax expenditures including tax credits, tax incremental financing and miscellaneous tax preferences (WV SBO, 2016). The long-term outlook section discusses pension and OPEB liabilities. OPEB is a high priority in the state, and the FY 2017 executive proposal describes changes to address its liabilities, such as \$30 million in additional funding per year between FY 2017 and FY 2021. Long-term debt obligations are thoroughly explained in the executive proposal as well. Every general obligation and revenue bond still outstanding is described, and the overall debt burden is projected through FY 2021 along with debt service payments through full payment. Deferred expenditures are not mentioned in the budget documents, but one-time expenditures such as surpluses or rainy day funds to address budget shortfalls are described in the narratives, and the long-term forecast includes a line item of one-time expenditures for building projects and renovations through FY 2021.

Overall, West Virginia provides a good view of its structural (im)balance. An easy-to-understand graph showing the diverging revenues and expenditures over time allows the general public to see when and to what extent a gap is expected. The frank disclosure of problem areas helps the governor and the legislature make informed choices in the present while also allowing the public to remain involved.

Maryland also explicitly discloses structural deficits. The Spending Affordability Committee, a bicameral legislative group, produces an annual Interim Report that documents structural balance in the state (MD SAC, 2016). The committee assesses Maryland's economic status based on income and wealth data then incorporates "economic performance, revenue estimates, and budget requirements" (MD SAC, 2016, p.1). Employment statistics are used in the analysis, and Maryland compares its past and projected jobs performance to national trends as well as to its neighboring state, Virginia.

The budget utilizes a current services approach and adjusts the forecast based on caseload assumptions, inflation, salary increases and changes to laws and policies. The committee's evaluation of revenues and expenditures projects structural imbalances and itemizes the estimated costs of major programs such as Medicaid after adjusting for program-specific inflationary factors. Unlike West Virginia, Maryland does not feature comprehensive tax exemptions in its analysis of future revenues nor does it thoroughly discuss OPEB liabilities. Pensions and debt are analyzed in detail, however. In its summary of structural balance, the committee presents an easy-to-read graph of ongoing revenues and expenditures six years into the future, showing what would happen to a deficit if not addressed in the present. Overall, while

both West Virginia and Maryland are thorough in their analysis of structural deficits, West Virginia is easier to access and easier for a layperson to understand; more details of West Virginia’s long-term forecasting processes are discussed in the next section.

Another example of a state that discloses structural balance issues well is California. As part of its annual budget documents, California’s Legislative Analyst’s Office produces a fiscal outlook document that analyzes the state’s revenues, expenditures and major programs into four future fiscal years and estimates the projected revenue and expenditure balance under positive and negative economic scenarios (CA LAO, 2016). The outlook also briefly discusses forecasts for debt and pension obligations. Notably, California provides comprehensive analyses of its major program initiatives, which it breaks down into education, health and human services, judiciary and criminal justice, employee compensation and retirement costs, unemployment insurance, and debt service on infrastructure bonds. This information underpins their methodology for projecting expenditures.

The fiscal outlook accompanying California’s FY 2018 budget emphasizes the uncertainty for the state in the next five years, which becomes apparent when comparing their positive and negative economic forecasts. Unlike West Virginia and Maryland that depict deficits with line graphs showing diverging revenues and expenditures, California uses bar charts to show surpluses or deficits over time. In the FY 2018 report, the positive, “under growth” projection details operating surpluses through FY 2021, including the amounts destined for the rainy day fund; the negative, “mild recession” scenario shows operating deficits and how much of the gap would be covered by the rainy day fund balance. Some years of the outlook also include a consolidated chart of revenues and expenditure projections under positive, negative and main/neutral scenarios (CA LAO, 2014, p.60). This chart also incorporates debt payments and rainy day fund deposits under the three scenarios and clearly displays the “bottom line” surplus/deficit calculation at the bottom.

**Table 1. Availability and Ease of Interpreting Structural Balance, FY 2015-17**

	DISCLOSES STRUCTURAL DEFICITS EXPLICITLY	TRANSPARENCY- CENTERED WEBSITE	ALL REV., EXP. AND LONG-TERM LIABILITIES ON WEBSITE	ALL REV., EXP. AND LONG-TERM LIABILITIES IN MULTI- YEAR FORECAST
Alabama	N	Y	N	N
Alaska	Y	Y	N	N
Arizona	Y	Y	N	N
Arkansas	N	Y	N	N
California	Y	Y	N	N
Colorado	N	Y	N	N
Connecticut	Y	Y	N	N
Delaware	N	Y	N	N
Florida	N	Y	N	N
Georgia	N	Y	N	N
Hawaii	N*	Y	N	N



Idaho	N	Y	N	N
Illinois	Y	Y	N	N
Indiana	N	Y	N	N
Iowa	N	Y	N	N
Kansas	N	Y	N	N
Kentucky	N	Y	N	N
Louisiana	N	Y	N	N
Maine	N	Y	N	N
Maryland	Y	Y	N	N
Massachusetts	Y <sup>o</sup>	Y	N	N
Michigan	N	Y	N	N
Minnesota	Y	Y	N	N
Mississippi	N*	Y	N	N
Missouri	N	Y	N	N
Montana	N <sup>^</sup>	Y	N	N
Nebraska	N*	Y	N	N
Nevada	N	Y	N	N
New Hampshire	N	Y	N	N
New Jersey	N	Y	N	N
New Mexico	N	Y	N	N
New York	Y	Y	N	N
North Carolina	Y	Y	N	N
North Dakota	N	Y	N	N
Ohio	N	Y	N	N
Oklahoma	N	Y	N	N
Oregon	N	Y	N	N
Pennsylvania	N*	Y	N	N
Rhode Island	Y	Y	N	N
South Carolina	N	Y	N	N
South Dakota	N	Y	N	N
Tennessee	N	Y	N	N
Texas	N	Y	N	N
Utah	N	Y	N	N
Vermont	N	Y	N	N
Virginia	N	Y	N	N
Washington	Y	Y	N	N
West Virginia	Y	Y	N	N
Wisconsin	N	Y	N	N
Wyoming	N	Y	N	N

Note: Answers may not match with Volcker Alliance responses because of definition differences.

Y: Yes; N: No;

\*Deficit or structural balance concern was identified but included no substantial description or analysis.

<sup>^</sup>Forecast was present but less than three future years.

<sup>o</sup>In its executive proposal, Massachusetts details the methodology behind long-term forecasting and structural balance in narrative form but does not provide year-by-year breakdowns of forecasts.

## MULTI-YEAR FORECASTS

Our definition of a multi-year forecast requires at least three future fiscal years to ensure at least one year is projected beyond the upcoming budget cycle because 19 states have biennial budget cycles. As Table 2 below shows, most states produced multi-year revenue forecasts, but 19 did not fulfill our multi-year criteria: Tennessee, for example, projects future revenues but only for two years. Arkansas, Delaware, Louisiana, Maine, Nebraska, New Mexico, Oregon, Vermont, and Wyoming produce revenue but not expenditure forecasts, and Kentucky only projects

expenditures two years beyond the current year. Only Arizona, California, Connecticut, Hawaii, Illinois, Minnesota and New York produce detailed, multi-year projections of major program costs that are easily accessible through Google searches. California, Minnesota, Pennsylvania, Texas and Washington estimate tax expenditures at a multi-year level, although Washington only produces these analyses every four years. Kentucky, Maine, Ohio and Oregon project tax expenditures beyond the upcoming fiscal year but fall short of the three future year criteria. Several other states also produce tax expenditure reports but look retrospectively at the costs in previous fiscal years. Only a few states, such as Tennessee and West Virginia, include tax expenditures in their executive budget proposals. Only California, Minnesota and Pennsylvania produce multi-year revenue, expenditure, major program and tax expenditure forecasts, but the states vary widely in their accessibility and the rigor of their assumptions.

Like California, discussed above, Florida and Virginia use some of the most detailed long-term forecasting assumptions. Florida's revenue and expenditure forecasts are contained in a user-friendly, long-range financial outlook supplied by the Senate Committee on Appropriations, the House Appropriations Committee and the Legislative Office of Economic and Demographic Research (Florida Forecast, 2015). Beyond the three-year forecasts, the document covers potential risks to the revenue estimates, legal concerns and budget drivers. The budget drivers are divided into the critical needs group, which must be funded, and the other high priority needs group, which includes items often funded in recent years. Major programs such as public education, for example, include adjustments for increasing workload and enrollment to maintain the same level of state funds per student.

Virginia releases its multi-year forecasts through the Department of Planning and Budget in tandem with the governor's biennial budget proposal, but the forecasts are embedded in a general fund six-year financial plan (VA DPB, 2016). An average citizen would need to know the forecasts are in this document and know how to find it on the Department of Planning and Budget's website—it is not easily accessible to a layperson. Nonetheless, the financial plan shows comparisons of revenue and expenditure forecasting six years in the future, then breaks down expenditures by agency with detailed assumptions for each agency's expenditure projections including projected policy changes. Virginia's public education assumptions include biennial re-benchmarking with odd-year enrollment increases to maintain full funding of the state's Standards of Quality funding goals. The financial plan has limited revenue assumptions, but the consensus forecasting groups' reports on the Secretary of Finances website provide thorough analyses of revenue expectations. Both Florida and Virginia have the most complete analyses of forecasts in the southeast, but Florida is easier for the public to access and understand.

West Virginia also creates a six-year financial plan, as discussed previously, presented in the executive budget document, and South Carolina creates a similar three-year financial outlook produced by its Revenue and Fiscal Affairs Office (WV SBO, 2016; SC RFAO, 2016). The South Carolina outlook is more difficult to locate than the West Virginia plan. In both, the forecasts are

tied more to state-level economic trends and less to national ones. Nevertheless, the major programs incorporate inflation, workload increases and potential policy/program changes, which are thoroughly discussed.

Utah’s forecasting process offers insight into how other states would be able to strengthen their forecasts (Lucia, 2016). The state has integrated a stress test into its forecasting process that is adapted from the Federal Reserve’s test for evaluating banking firms. This test adds to the traditional forecasting process “adverse” and “severe” outlooks to show policymakers the potential fiscal health of Utah in the event of a minor economic downturn or even another Great Recession. With three versions of a long-term forecast, policymakers can weigh the potential consequences of choosing a more or less conservative approach against the long-term fiscal health of the state. In the southeast, Virginia’s consensus forecasting groups estimate positive, standard, and negative revenue forecasts, but the practice needs to be expanded to long-term projections for revenues, expenditures and major programs.

**Table 2. Availability of Multi-year Forecasts and Assumptions, FY 2015-17**

	BUDGET CYCLE	MULTI-YEAR REVENUE FORECASTS	MULTI-YEAR EXPENDITURE FORECASTS	MULTI-YEAR MAJOR PROGRAM FORECASTS	MULTI-YEAR TAX EXPENDITURE FORECASTS
Alabama	A	N	N	N	C
Alaska	A	Y1	Y2	Y2	N
Arizona	A	Y1	Y1	Y1	C
Arkansas	A	Y1	N	N	R
California	A	Y1	Y1	Y1	F
Colorado	A	N	N	N	R
Connecticut	B	Y1	Y1	Y1	C
Delaware	A	Y1	N	N	C
Florida	A	Y1	Y3	Y3	C
Georgia	A	Y3	Y2	N	C
Hawaiï	B	Y1	Y1	Y1	R*
Idaho	A	N	N	N	C
Illinois	A	Y1	Y1	Y1	N*
Indiana	B	N	N	N	N*
Iowa	A	N	N	N	N*
Kansas	A	N	N	N	N*
Kentucky	B	Y1	N	N	C^
Louisiana	A	Y1	N	N	C
Maine	B	Y1	N	N	C^
Maryland	A	Y1	Y1	N	C
Massachusetts	A	N	N	N	C
Michigan	A	N	N	N	C
Minnesota	B	Y1	Y1	Y1	F
Mississippi	A	Y2	Y2	N	C
Missouri	A	N	N	N	N
Montana	B	N	N	N	C
Nebraska	B	Y2	N	N	C
Nevada	B	N	N	N	R
New Hampshire	B	N	N	N	R
New Jersey	A	N	N	N	C

New Mexico	A	Y3	N	N	R
New York	A	Y1	Y1	Y1	R
North Carolina	B	Y1	Y3	N	C
North Dakota	B	N	N	N	N
Ohio	B	N	N	N	C^
Oklahoma	A	Y1	Y1	N	C
Oregon	B	Y1	N	N	C^
Pennsylvania	A	Y2	Y2	Y2	F
Rhode Island	A	Y2	Y2	Y2	C
South Carolina	A	Y1	Y3	Y3	N*
South Dakota	A	Y2	Y2	Y2	C
Tennessee	A	N	N	N	C*
Texas	B	N	N	N	F
Utah	A	N	N	N	N*
Vermont	A	Y1	N	N	C
Virginia	B	Y1	Y3	Y3	N*
Washington	B	Y1	Y1	N	F*
West Virginia	A	Y2	Y2	Y2	C
Wisconsin	B	N	N	N	R
Wyoming	B	Y1	N	N	N

Note: Answers may not match with Volcker Alliance responses because of definition differences.

A: Annual; B: Biennial; N: Not available; C: Current year only; F: three future years available; R: retrospective analysis only; Y: Yes; N: No

Y1: Multi-year forecast information can be easily found through Google search of "[state] [topic keywords]" (e.g., "Florida revenue forecast"); search results link directly to document with the information or to related page where document can be easily found; Topic Keywords for each search: revenue forecast, expenditure forecast/outlook, tax expenditure/break/abatement/credit, public education/Medicaid revenue/expenditures

Y2: Information is in the budget documents but requires searching executive/legislative websites or detailed search of budget; an average citizen could locate it.

Y3: Information is in the budget documents but difficult to find or requires expert knowledge.

^ Forecast not three full years; \*Reports are made but are not annual/biennial or are not consistent.

### OTHER LONG-TERM LIABILITIES

Other long-term liabilities proved a challenge to find in the budget documents (Table 3 below). As mentioned above, the CAFR is not considered a budget document in this analysis because it gives a retrospective view of long-term liabilities, produced well after the end of the analyzed fiscal year; similarly, bond documents often pull financial information from the CAFR and are not considered budget documents in this context. Most debt affordability studies were also excluded as budget documentation. Many states now produce debt affordability or debt capacity studies, but they differ widely in the regularity, timeliness and quality of these reports. Even debt reports that coincide with the release of the executive budget document are often difficult to locate; indeed, the average citizen (and potentially an expert researcher) would likely need to know in advance that the state produces a debt affordability study to find it.

With regard to pensions and OPEB, only Connecticut and Hawaii include multi-year annual required contributions (ARC), with Illinois including only the pension ARC. For the other states, while some budget documents talk about pension funding levels or total contributions, none define the current or upcoming budget cycle's ARC, or the actual intended contributions relative to the ARC, in the budget documents. Furthermore, only California includes a multi-year estimate of cumulative deferred maintenance cost projections in the budget documents. Alaska and

Hawaii include comprehensive deferred maintenance costs but only for the current and recent fiscal years. Some states incorporate individual agencies or items used to address deferred maintenance, like Kentucky and West Virginia, but the information is incomplete and does not project into the future. Many states have debt service requirements in the budget documents, but only 16 display future debt service in a schedule or table: Alabama, California, Florida, Illinois, Maine, Maryland, Minnesota, Missouri, New York, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Washington and West Virginia.

In its long-range financial outlook, Florida produces a concise and complete analysis of its debt profile. The state compares projected debt issuance and debt service to historical levels, parallels its debt profile to national and peer groups medians and translates the information into easily readable graphs and tables. West Virginia gives one of the most complete analyses of its debt. The executive budget document compares the debt burden to other states rated similarly by Moody's Investors Service as a per capita value and in terms of the percentage of income; it also discusses debt policy and the debt spending limits of every state-level issuing authority. For both general obligation and revenue bonds, the total outstanding obligations are projected at least five years into the future, and debt service requirements are projected through full repayment.

**Table 3. Availability of Multi-year Forecasts and Assumptions for Other Long-term Obligations, FY 2015-17**

	DEBT AFFORDABILITY/ CAPACITY STUDIES	DEBT SERVICE SCHEDULE FORECASTS*	PENSION REQUIREMENTS FORECASTS INCLUDING ARC	OPEB REQUIREMENTS FORECASTS INCLUDING ARC	DEFERRED MAINTENANCE FORECASTS
Alabama	N	F	N	N	N
Alaska	Y	C	N	N	C
Arizona	N	C	N	N	N
Arkansas	N	C	N	N	N
California	Y	F	N	N	F
Colorado	N	N	N	N	N
Connecticut	Y	C	F	F	N
Delaware	N	C	N	N	N
Florida	Y	F	N	N	N
Georgia	Y	C	N	N	N
Hawaii	Y	C	F	F	C
Idaho	N	C	N	N	N
Illinois	Y	F	F	N	N
Indiana	N	N	N	N	N
Iowa	N	N	N	N	N
Kansas	Y	C	N	N	N
Kentucky	N	C	N	N	N
Louisiana	Y	C	N	N	N
Maine	N	F	N	N	N
Maryland	Y	F	N	N	N
Massachusetts	Y	C	C	C	N
Michigan	N	N	N	N	N
Minnesota	Y	F	N	N	N
Mississippi	Y	C	N	N	N

Missouri	N	F	N	N	N
Montana	N	N	N	N	N
Nebraska	N	N	N	N	N
Nevada	Y	N	N	N	N
New Hampshire	Y	N	N	N	N
New Jersey	Y	C	N	N	N
New Mexico	Y	C	N	N	N
New York	N	F	N	N	N
North Carolina	Y	C	N	N	N
North Dakota	N	N <sup>^</sup>	N	N	N
Ohio	N	N	N	N	N
Oklahoma	N	C	N	N	N
Oregon	Y	F	N	N	N
Pennsylvania	N	F	N	N	N
Rhode Island	Y	F	N	N	N
South Carolina	Y	C	N	N	N
South Dakota	Y	F	N	N	N
Tennessee	Y	F	N	N	N
Texas	Y	N	N	N	N
Utah	N	C	N	N	N
Vermont	Y	C	N	N	N
Virginia	Y	C	N	N	N
Washington	Y	F	N	N	N
West Virginia	Y	F	N	N	N
Wisconsin	N	N	N	N	N
Wyoming	N	N <sup>^</sup>	N	N	N

<sup>^</sup>May not match Volcker Alliance responses because we do not include CAFR as budget document

Y: Yes; F: At least three future fiscal years available; C: Current/upcoming fiscal year or biennium available only; N:

No or information is not available in the budget documents online;

<sup>^</sup>Does not have general obligation bonds outstanding as of FY 2017

## Conclusion

Every state has room to improve its transparency practices to ensure better fiscal health and governmental accountability. We can see that every state has made some kind of effort to disclose fiscal information through a transparency website, but the information varies among states. Without all the relevant revenues, expenditures and liabilities projected into the future, states cannot clearly relay their financial position to their citizens. No state fulfilled all of our criteria—this is particularly apparent in the lack of future pension and OPEB liability projections, where many states have significantly underfunded systems but do not clearly show how these problems may affect future generations. Ultimately, states should aim to produce a single, multi-year forecasting document that encompasses revenues, expenditures, other long-term obligations and their detailed assumptions, so that structural balance and overall fiscal health are readily apparent to the public.

## References

- Alt, J.E., Lassen, D.D., and Rose, S. (2006). The Causes of Fiscal Transparency: Evidence from the U.S. States. *IMF Staff Papers*, 53. Retrieved from [www.imf.org/External/Pubs/FT/staffp/2006/03/pdf/alt.pdf](http://www.imf.org/External/Pubs/FT/staffp/2006/03/pdf/alt.pdf).
- Alt, J.E. and Lowry, R.C. (2010). Transparency and Accountability: Empirical Results for US States. *Journal of Theoretical Politics*, 22(4), 379-406.
- Arbatli, E. and Escolano, J. (2015). Fiscal Transparency, Fiscal Performance and Credit Ratings. *Fiscal Studies*, 36(2), 237-270. doi/10.1111/1475-5890.12051
- Bastida, F. and Benito, B. (2007). Central Government Budget Practices and Transparency. *Public Administration*, 85(3), 667-716. doi/10.1111/j.1467-9299.2007.00664.x
- Benito, B. and Bastida, F. (2009). Budget Transparency, Fiscal Performance, and Political Turnout: An International Approach. *Public Administration Review*, 69(3), 403-417. doi/10.1111/j.1540-6210.2009.01988.x
- Bennett, J., and DiLorenzo, T. (1983). *Underground Government: The Off-Budget Public Sector*. Washington, D.C.: Cato Institute.
- Bertot, J.C., Jaeger, P.T., and Grimes, J.M. (2010). Using ICTs to Create a Culture of Transparency: E-Government and Social Media as Openness and Anti-Corruption Tools for Societies. *Government Information Quarterly*, 27(3), 264-271. doi.org/10.1016/j.giq.2010.03.001
- Bourdeaux, C. (2018). Loss Aversion and Strategic Choices in Cutting Budgets. *Public Finance and Management*, 18(1): pp.4-38.
- Buchanan, J. Public Debt, Cost Theory and Fiscal Illusion. In *Public Debt and Future Generations*, edited by James Ferguson. Chapel Hill, NC: The University of North Carolina Press. 1964.
- California's Legislative Analyst's Office. (2014, November). The 2015-2016 Budget: California's Fiscal Outlook.
- California's Legislative Analyst's Office [CA LAO]. (2016, November). The 2017-2018 Budget: California's Fiscal Outlook.
- Fiorina, M. Legislative Uncertainty, Legislative Control, and the Delegation of Legislative Power. *Journal of Law, Economics and Organization*. 1986, 2:33-50.
- Florida's Senate Committee on Appropriations, the House Appropriations Committee, and the Legislative Office of Economic and Demographic Research [Florida Forecast]. (2015, Fall). Long-Range Financial Outlook, FY 2016/17-2018/19.

- Garrett, E. and Vermeule, A. (2006). Transparency in the Budget Process. University of Chicago Public Law and Legal Theory Working Paper, No. 115.
- Georgia's Office of Planning and Budget [GA OPB]. (2017). The Governor's Budget Report - FY2018.
- Hameed, F. (2011). Budget Transparency and Financial Markets. *International Budget Partnership Working Papers*.
- Heald, D. (2003). Fiscal Transparency: Concepts, Measurement and UK Practice. *Public Administration*, 81(4), 723-759. doi/10.1111/j.0033-3298.2003.00369.x
- International Monetary Fund [IMF]. (2014). The Fiscal Transparency Code. Washington, D.C.: IMF.
- Khagram, S., de Renzio, P., and and Fung, A. (2013). Overview and Synthesis: The Political Economy of Fiscal Transparency, Participation, and Accountability around the World. In S. Khagram, P. de Renzio, and A. Fung (Eds.), *Open Budgets: The Political Economy of Transparency, Participation, and Accountability*. Washington, DC.: Brookings Institution Press.
- Kopits, G. and Craig, J. (1998). Transparency in Government Operations, Occasional Paper 158. Washington, D.C.: International Monetary Fund. Retrieved from [www.imf.org/external/pubs/ft/op/158/op158.pdf](http://www.imf.org/external/pubs/ft/op/158/op158.pdf)
- Linden, R. (2010). Transparency Breeds Self-Correcting Behavior. *Government Finance Review*, 26(5), 95-96.
- Lucia, B. (2016, January 20). Utah Turns to Budget 'Stress Tests' to Help Prepare for Future Downturns. Route Fifty. Retrieved from [www.routefifty.com/2016/01/utah-budget-stress-tests/125257/](http://www.routefifty.com/2016/01/utah-budget-stress-tests/125257/)
- Maryland's Spending Affordability Committee [MD SAC]. (2016, December). 2016 Interim Report.
- McNichol, E., Lav, I., and Leachman, M. (2015). Better State Budget Planning Can Help Build Healthier Economies. Washington, D.C.: Center on Budget and Policy Priorities.
- Meijer, A. (2009). Understanding modern transparency. *International Review of Administrative Sciences*, 75(2), 255-269. doi/10.1177/0020852309104175
- Mueller, D. (1989). *Public Choice II*. Cambridge: Cambridge University Press.
- Novy-Marx, R. and Rauh, J.D. (2009). The Liabilities and Risks of State-Sponsored Pension Plans. *Journal of Economic Perspectives*, 23(4), 191-210.
- Organisation for Economic Co-operation and Development [OECD]. (2002). *Best Practices for Budget Transparency*. Paris: OECD.
- Polackova Brixli, H. and Schick, A. (2002). *Government at Risk: Contingent Liabilities and Fiscal Risk*. Washington D.C.: World Bank and Oxford University Press.



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Ramkumar, V. and Shapiro, I. (2010). Guide to Transparency in Government Budget Reports: Why are Budget Reports Important, and What Should They Include? International Budget Partnership.

Rose, S. and Smith, D.L. (2011). Budget Slack, Institutions, and Transparency. *Public Administration Review*, 72(2), 187-195. doi/10.1111/j.1540-6210.2011.02491.x

South Carolina's Revenue and Fiscal Affairs Office [SC RFAO]. (2016, December). Three-Year General Fund Financial Outlook, FY2017/18-2019/20.

Von Hagen, J. (1992). Budgeting Procedures and Fiscal Performance in the European Communities. *Economic Papers*, 96, Commission of the European Communities.

West Virginia's State Budget Office [WV SBO]. (2016, January). Volume I: Budget Report, Executive Budget FY 2017.

Virginia's Department of Planning and Budget [VA DPB]. (2016, January). General Fund Six-Year Financial Plan, FY 2017-2022.

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