RETHINKING BUDGETING

DESIGNING FOR THE DECISION-MAKING ENVIRONMENT

Designing for Who People Are, Not Who They Should Be

ABOUT THE AUTHORS

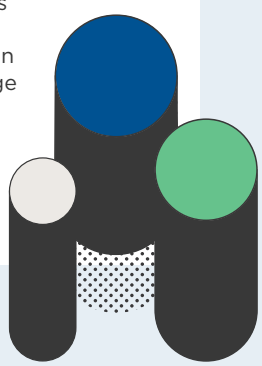
- **Linnea Gandhi** is the founder of BehavioralSight, an ExecEd Lecturer at The University of Chicago, and a PhD candidate at Wharton. The BehavioralSight team has taught over 1500 students and worked with over 50 cross-industry client partners, helping address challenges in human capital, marketing, product development, and strategic decision making. As part of their commitment to bringing clients like GFOA cutting-edge "pracademic" insight, they continue to train and collaborate with top experts in their field, including Richard Thaler (author of *Nudge*) and Daniel Kahneman (author of *Thinking, Fast and Slow*).
- **Shayne Kavanagh** is the Senior Manager of Research for GFOA and has been a leader in developing the practice and technique of long-term financial planning and policies for local government. He is the author of a number of influential publications and articles on financial planning, including: *Financing the Future, Financial Policies: Design and Implementation*, and GFOA's latest and most complete guidance for how to achieve and maintain the financial health of local governments *Financial Foundations for Thriving Communities*.

ABOUT GFOA

The Government Finance Officers Association (GFOA) represents over 21,000 public finance officers throughout the United States and Canada. GFOA's mission is to advance excellence in government finance. GFOA views its role as a resource, educator, facilitator, and advocate for both its members and the governments they serve and provides best practice guidance, leadership, professional development, resources and tools, networking opportunities, award programs, and advisory services.

ABOUT THE RETHINKING REVENUE PROJECT

Local governments have long relied on incremental, line item budgeting where last year's budget becomes next year's budget with changes around the margin. Though this form of budgeting has its advantages and can be useful under circumstances of stability, it also has important disadvantages. The primary disadvantage is that it causes local governments to be slow to adapt to changing conditions. The premise of the "Rethinking Budgeting" initiative is that the public finance profession has an opportunity to update local government budgeting practices to take advantage of new ways of thinking, new technologies, and to better meet the changing needs of communities. The Rethinking Budgeting initiative will seek out and share unconventional, but promising methods for local governments to improve how they budget.



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We are not as rational as we think. Psychologists have discovered how we are predictably irrational. We can use this to improve decisions in public finance.

People are not rational, yet we often assume they are. For example, classical economics is based on the assumption that people are rational maximizers of their self-interest. However, recent Nobel Prize-winning scientific research has shown this is not true. Rather than thinking through decisions rationally and comprehensively, people use a variety of mental shortcuts to make decisions. Oftentimes, these shortcuts are harmless and even helpful. But sometimes they backfire. Behavioral scientists have cataloged a number of these shortcuts and when they can go wrong. When these shortcuts fail, they are called "cognitive biases." These biases can negatively impact all types of decisions, including budget decisions. If we know these biases, we can plan mitigations.

This article is based on a webinar series presented by GFOA called **"Using Behavioral Science for Better Decision-Making and Budgeting."** These webinars were well received. Below are a few reviews from GFOA members:

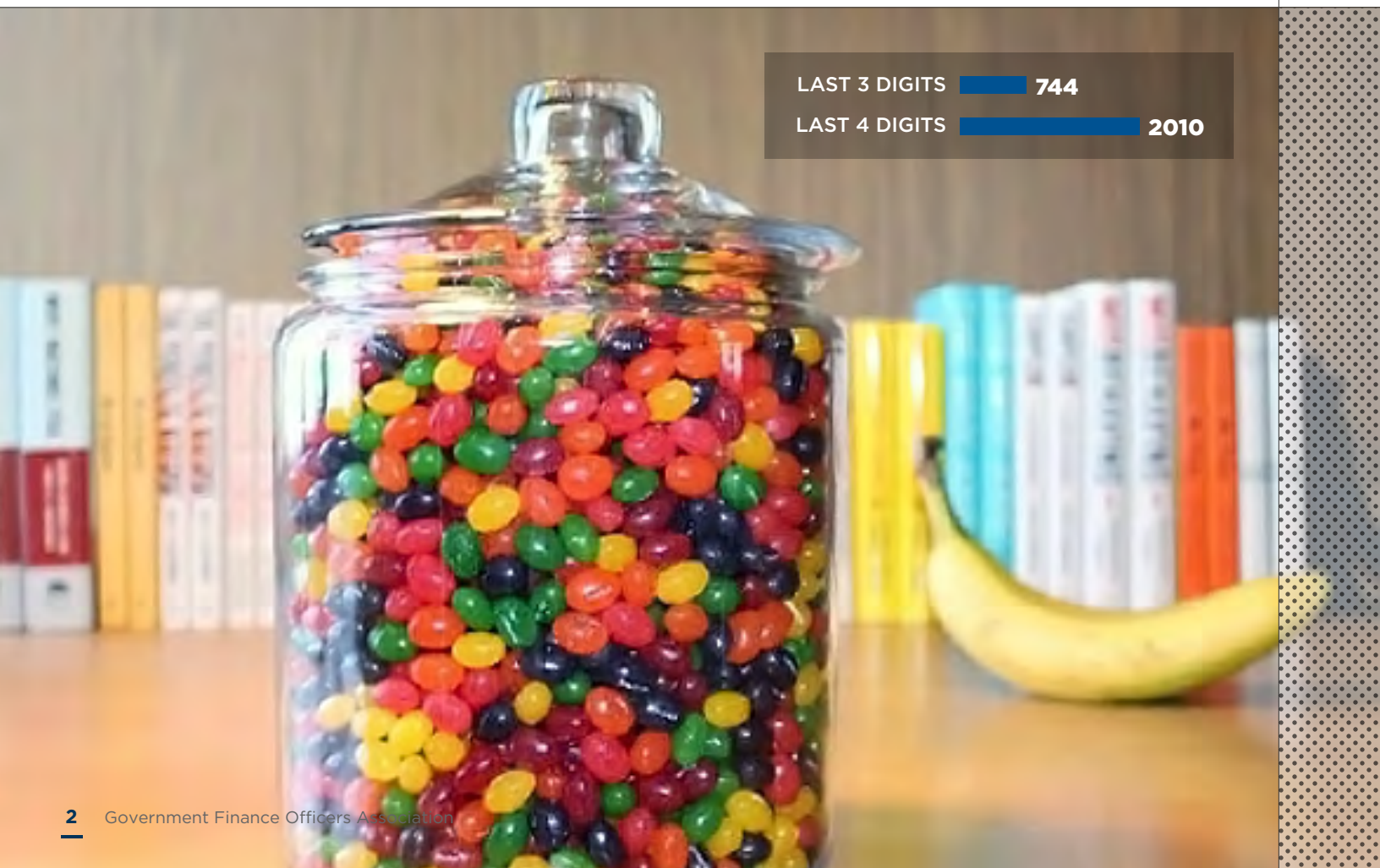
> *"I have attended many different GFOA training sessions, both live and online, and I have to say that this behavioral science webinar was one of the best I have ever participated in!"*
>
> *"Two thumbs up. It'd be more if I had more thumbs."*
>
> *"The behavioral science webinars were insightful and intriguing."*

We have provided this article to bring you some insights from the webinar series. If you'd like to access a recording of the webinars visit **gfoa.org/materials/behavioral-science-2021**.

Anchoring Bias

A common bias is called anchoring bias. This means that once we are presented with a number, we tend to stick close to that number for future decisions. This can be useful. For example, if you know what your neighbor's house recently sold for, that gives you a good anchor for negotiating the sale of your own home (and not selling for too little). However, anchoring can backfire if your anchor is not relevant to the decision at hand. For example, 77 GFOA members who participated in our recent webinar also participated in a survey before the webinar. As part of the survey, members were randomized into two groups: Half were asked to provide the first three digits of their phone number (which averaged to 473). The other half were asked to provide the last four digits (which averaged to 4348). All participants were then asked to estimate the number of jelly beans in the jar depicted below. Of course, the phone numbers the respondents provided were irrelevant to the number of jelly beans, but we can see from the average guess of the two groups that those people who provided the smaller number for their phone (i.e., three digits instead of four) provided a lower guess on the number of beans.

Let's think about how anchoring could apply to budget decisions. Perhaps the most obvious example is incremental budgeting, where last year's budget is the basis for next year's budget. If revenues are stable and the service demands from the community are consistent from year to year, incremental budgeting may be a workable shortcut for doing budgeting faster and easier. However, if the government is in a situation where revenues are not stable and/or there are new challenges that government needs to confront, then the "anchor" of what was spent before may not be helpful. One way to help overcome this problem might be to break departmental spending down into programs. Thus, the focus could shift from what was spent on that department last year to which programs are most important for addressing current challenges. This is known as **priority-based budgeting**.



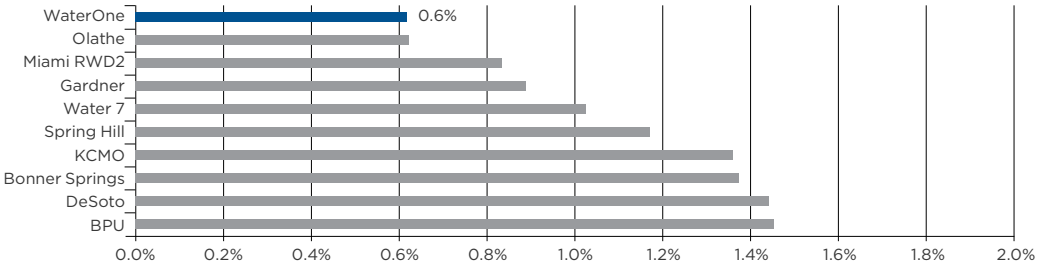
Another example of anchoring bias is when benchmark statistics from comparable governments are used as a basis for making decisions about reserves, rates, etc. Though having a reference point can be helpful in some cases, benchmarks can be a hindrance if they are not relevant to your government's context. One of the participants in the webinar, Natalie Morrison from WaterOne, shared a story for how this impacted WaterOne's ability to provide affordable rates to its customers.

> *"For water affordability, it is very common to compare your rates to your neighbors and then also use a benchmark percentage for the average bill as a percent of median household income. Everyone uses either their neighbors' rates or this generic threshold to determine affordability—which may or may not actually mean the utility is affordable based on the specific demographics of the service territory.*
>
> *As WaterOne took a closer look at how our lowest income customers might be disproportionately burdened by their water bill, we liked to use the analogy articulated by Dr. Manny Teodoro that 'when we are buying shoes, we shouldn't be measuring our neighbor's feet.' Meaning we want to make decisions based purely on what is best for our rate payers and what our publicly elected Board determines to be affordable for our rate payers."*

Below is a graphic with benchmarking data and then a new graphic that avoids peer comparisons. If the objective is to provide affordable water to low-income households, the new graphic seems like a clear improvement. The old graphic might imply that low-income residents are paying too little! The new graphic emphasizes how little income low-income residents have, so anything WaterOne can do to help them save money could make a difference.

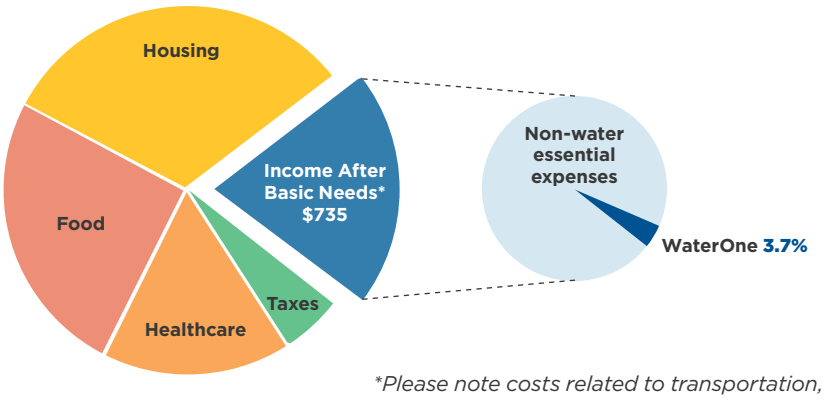
WaterOne 2021 Budget | Revenue & Rates

Local Utility Comparison: *Typical Monthly Amount as a % of Median Household Income*



In the graph above, the typical monthly amount is compared to median household income for WaterOne. This provides a measurement of community affordability. In the graph below, low usage typical monthly amount is compared to the 20th percentile income, representing a comprehensive view of household affordability for WaterOne.

Household Affordability: *Low Usage Monthly Amount as a % of 20th Percentile Income After Basic Needs*



**Please note costs related to transportation, childcare, energy, and other household needs are not included in Basic Needs calculation.*

The key takeaway here is, first, to think about the relevance of the anchors you are providing to decision-makers. Whether serving as a comparative reference point or a standalone value, these can and will shape subsequent decisions. For example, if a budget needs to be rethought, providing historical numbers might reduce the amount of change people will engage in. Or a comparative benchmark might not be relevant to your own context.

Second, recognize the weaknesses of incremental budgeting. Sometimes a shortcut is OK. Look for parts of the budget where shortcuts work well and use them there. Avoid shortcuts for parts of the budget where a critical examination is required to better serve the community.

Recency Bias

Another bias that afflicts budgeting is called recency bias. This means: That which is more recent comes to mind more easily, and that which comes to mind more easily tends to be thought of as more probable, likely or prevalent. For example, when formulating an annual budget, a current "hot topic" might be overweighted versus long-term, persistent, more important challenges that the local government faces. One design solution might be to link strategic and long-term planning to the budgeting process, where decision-makers are reminded of all the issues facing the local government before making budget decisions.

Another example of recency bias might be where a citizen comes to a public meeting to complain about an issue they are concerned about but which is not representative of broader community sentiment. That issue and the citizen's perspective on it then is overweighted in the discussion. The solution here might be to make a habit of regular surveys, or to use more representative approaches to community engagement—and to document the results and keep the results in front of decision-makers.

The commonality between the two solutions is to design a way for decision-makers to "zoom out" and see the big picture and not give too much attention to the most recent information they've been exposed to.

To mitigate recency bias, design a way for decision-makers to "zoom out" and see the big picture.

Departments often include "padding" in their budget to protect them against mistakes. A pooled contingency provides protection and saves money at the same time.

Assume People Will Make Mistakes

Finally, designing the decision-making environment is not only about mental shortcuts gone awry. Sometimes people make mistakes in their budget. Of course, department managers know they might make a mistake and, understandably, are more concerned about underbudgeting than overbudgeting. Hence, they tend to build some "slack" or "padding" into their budget. When all departments do this, the total amount of padding can add up. One way to address this is to create an annual pooled contingency that departments can draw from if they have unplanned, unavoidable expenditures. This is like an insurance program for department budgets. Local governments that have used this approach have found that, with this "insurance" in place, departments feel less need for their own budgetary padding, resulting in significant, ongoing savings. **Read more** about how to set up a pooled contingency and its benefits.

The finance officer can anticipate common mistakes people make and prepare mitigating strategies.

Conclusion

Cognitive biases and people's natural fallibility means that the budget officer needs to design a decision-making environment that anticipates the effects of biases and fallibility. This article has provided examples of some essential biases and mistakes and suggested solutions. We encourage you to learn more about the growing field of behavioral science and how it can be applied to budgeting. Look for additional articles from GFOA and consider checking out the **webinar series** on behavioral science that was recently offered by GFOA.

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