

Stress Tests

Building Budgeting Resilience in an Ever-Changing World

BY JACK RYAN-FELDMAN

In an unpredictable world, how do you ensure your budget can withstand unexpected crisis? Enter the budget stress test. This process reveals vulnerabilities in revenue streams and how flexibility in expenditures can help to develop more resilience.

Local government professionals have long known that they operate in an increasingly volatile, unpredictable, complex, and ambiguous world. This is not a new concept, but the health and economic crisis brought on by the COVID-19 pandemic has been an important reminder. Local governments need to respond by making sure they're accounting for this reality in their budgeting process and long-term financial plans.

Long-term decisions in an unpredictable world

Local governments make decisions every day that have a long-term impact on their communities—and these decisions are difficult enough, given the challenges each community faces. Communities deal with changes to the size or demographic composition of their population, changes to the

composition of local business, and mandates from state legislatures, all of which create challenges on the revenue side of the ledger. Long-term obligations such as debt and collective bargaining agreements coupled with the new and increasing demand for government services challenge governments from the expense side.

But that's not all. The environment of the community itself also changes at a fast clip.

All models are wrong, but some are useful

Given all the changes governments face, it's easy to see why someone would think there's no point in creating a long-term financial plan, as it will become obsolete in the next 12 months. Creating that plan takes a lot of time and effort. What's the point? Well, we need to remember



The shift to working remotely happened virtually overnight in 2020, causing a wide range of potential long term effects for communities with large concentrations of commercial office space.

what long-term plans and models are for. A long-term financial plan is not a map; it's a compass that allows decision-makers to see where they are headed and if they've strayed from the path (as in the government's strategies and plans). If the government has strayed, a long-term financial plan won't provide directions back to the path, but it does give the government an idea of how far away it is. So, yes, governments need to have a baseline long-term financial plan that shows the organization's structural balance and trajectory, assuming two percent annual inflation in revenues and expenses. But you shouldn't stop there—the model is only somewhat useful at this juncture.

One way to acknowledge the volatile, unpredictable, complex, and ambiguous world local governments operate in is to create a few scenarios that represent how a government would respond to various stressors. Then governments can “stress test” their budgets for resiliency in the face of economic shocks and other scenarios.

The first step here is understanding what assumptions are embedded in a “baseline” long-term financial plan, and alternatively, to see what a budget looks like when those assumptions are cast aside.

Enter the budget stress test

A budget stress test will primarily reveal three things: the susceptibility of certain revenue streams, the flexibility of expenditure decisions within the budget, and the margin a government has for enduring this new reality. According to recent research, the State of Utah was the first state to perform a budget stress test.¹ A local government of any size can undertake a simplified version of this stress test.



Start with your 5-year model, including baseline assumptions.

As mentioned above, start with the baseline 5-year model of your operating fund. Undertaking this exercise will help you understand the organization's history as it relates to:

- Revenue sources
- The relevant economic drivers of its expenditure history
- The major drivers of the growth from year to year
- The long-term commitments made as they relate to debt, pensions, and collective bargaining agreements
- The structural balance of the operating fund, absent any changes



Develop alternative scenarios for the stress test. After you've reviewed the baseline

long-term financial plan, you'll be able to identify the assumptions embedded in this document and the conditions and circumstances required for actualizing the plan. The onset of the COVID-19 lockdowns in March 2020 is an instructive case study for this part of the stress test. The economic questions for that period centered on

the kind of recovery the U.S. economy was going to experience as the economy reopened. As you may recall, there were “V-shaped” and “U-shaped” recoveries predicted, as well as a host of others including the “W,” “K,” and “swoosh-shaped” recovery. If you were conducting a stress test on your budget at that time, these were the alternative scenarios to forecast. Each one would have a different implication for revenues and expenditures, so a government would need to measure the resiliency of its budget under each scenario.

Moving to the present, we have additional scenarios to consider. Assumptions about population growth or decline and economic development patterns are embedded in your baseline assumptions. You’ll need

to think about the following types of scenarios as you consider what other scenarios to test:

- What if economic development patterns accelerated or decelerated?
- What happens if the largest employer in your community closes or leaves town?
- What natural disasters is your community susceptible to? (Even the unlikely ones—the country has experienced a number of unexpectedly severe weather events, fires, and so on in recent years.)
- What is your community’s competitive advantage, and what would happen if it went away?



Think about realistic budget adjustments.

Next, think through the potential budget

adjustments available to the organization and how easily those adjustments could be made. This is a difficult exercise, but it is instructive. The largest expenses for most local governments are personnel, debt, and capital, and each one is obviously important in its own way. Think through the budget alternatives available in each of these areas to determine how intractable the situation is. Some examples of budget alternatives include making use of cash reserves, holding existing position vacancies open for some period of time, and deferring capital expenditures while implementing new service fees (addressing both expenditures and revenue).

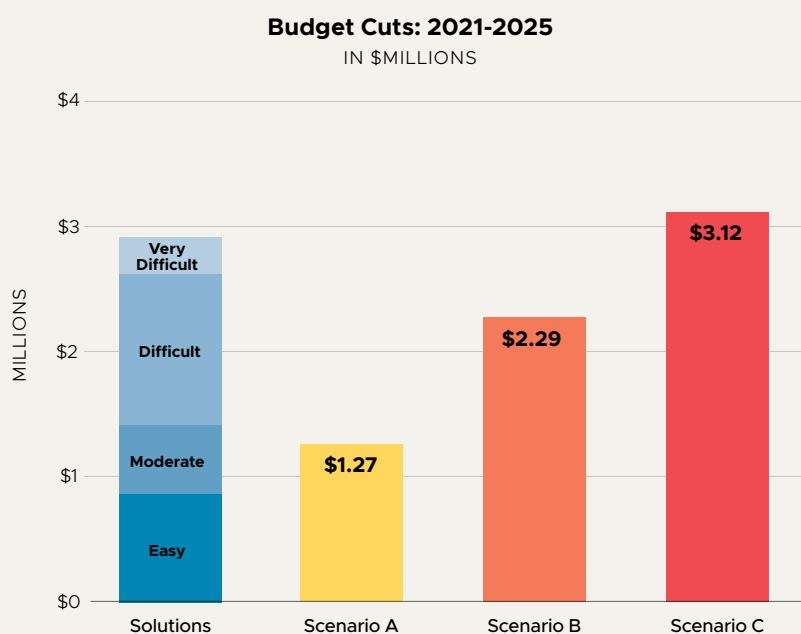
Once you’ve compiled a list of possible budget alternatives and their impacts, the next step is to categorize how easy or difficult these alternatives would be to access or implement. Consider “ease of access” through all lenses, including operational, political, and legal. In the example above, holding open vacant positions could be relatively easy to implement, but what impact would it have on operations? Certain capital expenditures can be deferred, but at the expense of further decay and therefore more expense in the future. New revenues that would require a referendum or change in existing law are very difficult to implement.



Summarize and report results.

You have now calculated lost revenue and/or added expenditures for your specified scenarios, identified potential solutions, and categorized them by

EXHIBIT 1 | THE STRESS TEST IN ACTION






Newark, New Jersey experienced unprecedented flooding and power outages after Tropical Storm Ida unleashed record rainfall and tornadoes throughout the Northeast. Budget stress tests can help communities assess their budget's resilience in the face of natural disasters, which have increased in severity in recent years.

accessibility. Now it's time to find out if your solutions rise to the challenge. How resilient is your budget in the face of potential economic impacts? Exhibit 1 demonstrates the stress test in action. In this example, the community has budget alternatives available to them that are easy or moderately easy to implement in response to Scenario A, but difficult or very difficult options are left in more severe situations like Scenarios B and C.

One note on political and interpersonal sensitivities as they relate to the stress test: Developing the budget alternatives and measuring their impact create obvious challenges, especially if you're tinkering with a sacred cow. This test can be conducted in public, as in the case of the State of Utah, where the analysis is part of the public budget process, or it can be completed internally by your organization's budget team or finance department. The results can be presented publicly or only distributed within the department. The important thing is to identify your organization's resilience. The implementation within your government will need to be specific to the realities of the organization.

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Promoting resiliency through the budget

The next crisis probably won't be a pandemic, a financial crisis, or a dot-com bust (the proximate causes of the last three recessions in the United States). In the volatile, unpredictable, complex, and ambiguous world environment that local governments operate in, the next crisis probably won't be predicted with any meaningful amount of advance warning. The importance of conducting a stress test is to determine whether your organization's budget is capable of handling crises of different magnitudes. The goal is that when another crisis emerges, the magnitude of its impact will be within the parameters of your stress test, allowing decision-makers to effectively adapt and rise to the challenge. 

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¹ Juliette Tennert, Angela J. Oh, Jonathan Ball, and Thomas Young, "From a Balanced Budget to Fiscal Sustainability," Kem C. Gardner Policy Institute at the University of Utah, 2019.