Steps for Effectively Addressing State and Local Pension Crises

A Prototype Road Map for Stakeholders
Public-sector pension underfunding is an urgent—and complicated—challenge facing many states, counties, and municipalities. It can have implications for the financial health of the government and can affect the retirement security of public-sector workers, the ability to recruit and retain workers for public service, the provision of public services if pension contributions crowd out other services, and state and local tax rates. There is not a single national pension crisis: There are many small crises throughout the United States, reflecting local circumstance, history, and constraints, including legacy pension costs.

Although the Great Recession led to a broad decrease in pension funding, the period since 2012 has revealed that many pension systems have continued to see their ability to cover their obligations decline despite a decade of sustained economic and stock market growth preceding the COVID-19 pandemic. The realization that pensions systems are consistently and substantially underfunded after more than a decade of reforms is telling. It is a cautionary sign to stakeholders—including policymakers, workers, retirees, employers, and taxpayers—about the piecemeal and unsystematic approaches of past reforms. Although underfunding is of course a financial issue, the actions that policymakers take to address underfunding may have real consequences in terms of the retirement security of public-sector workers, the recruitment and retention of these workers, tax rates, and the provision of other public services by the local government.
This comprehensive approach includes an evaluation of the literature, available tools and data, and knowledge from subject-matter experts. The road map takes a holistic perspective that recognizes the array of stakeholders, their incentives and constraints, and the time horizons affecting decisionmaking; the root causes that can lead to bad governance and practices; the range of alternative reform options and their effects not just on pension financing but on other outcomes of interest, such the effects on employee retirement savings; and workforce demographics. An important element of the road map is that it provides a menu of options to achieve feasible and effective reforms that are informed by rigorous research and analysis. These options include not just increasing pension contributions, increasing taxes, or other traditional policy options but also such options as changing governance, actuarial assumptions, and pension design.

The road map is intended to help guide state and local pension policymakers in their decision-making, as well as to help stakeholders who want to better understand the dimensions of public-sector pension reform and policy options. The elements of the road map are informed by the insights and findings of a companion report that summarizes research findings from the literature, available tools, and data, as well as discussions with subject-matter experts. The road map described here is a prototype because there are still gaps in understanding of the effectiveness of reforms on underfunding and other outcomes, such as retirement security, limiting the ability to identify trade-offs between reform options. The road map consists of the five elements shown in Figure 1.

What Is the Road Map, and Who Is It For?

To help stakeholders understand what drives these crises and what solutions exist, RAND Corporation researchers developed a prototype road map (i.e., framework) for reform.

FIGURE 1
THE ROAD MAP HAS FIVE KEY STEPS

1. Define Issues
   - Pension crisis definition
   - Who is affected and how
   - Institutional and legal setting
   - Past reforms

2. Understand Causes
   - Lack of expertise
   - Misaligned incentives
   - Poor accounting practices
   - Dysfunctional governance
   - Mistrustful government culture

3. Identify Goals
   - Outcome goals
   - Process goals

4. Find Effective Paths
   - Pension reform
   - Public finance reform
   - Accounting reform
   - Governance reform

5. Implement Reforms
   - Identify a leader
   - Establish communication plan
   - Track progress and resolve problems
   - Incorporate program evaluation
Stakeholders and Decisionmakers

Numerous groups and entities have a stake or interest in public-sector pensions or have oversight, financial, or accounting roles.

Taxpayers, voters, and residents are affected by public pensions if taxes are increased to finance pension obligations or if public services are cut due to pension financing crowding out other services (see Figure 2).

As the pension plan sponsor, the state legislature, county commission, or city council establishes the retirement system and determines how benefits are funded and administered. The relevant chief executive has the authority to approve changes proposed by the legislature, has budget proposal authority, and can approve members of the retirement system board.

Pension plan beneficiaries, including current retirees and current and future employees, will be affected by pension plan design and type and the generosity of benefits, which can then affect retirement security and alter employees’ recruitment and retention decisions.

Public employers usually must contribute to their employee pension systems, potentially crowding out other benefits, such as salary increases, and plan generosity and design can affect the recruitment and retention of employees, thereby affecting the experience mix and quality of the employer workforce.

Public employees are typically represented by employee unions that advocate for improved benefits, including pension benefits. Other interest groups include local businesses that might benefit from pension fund investments and voter groups or groups representing residents who seek to prevent elected officials from voting for increased taxes or cuts in services.

Plan managers and board members handle the practical aspects of governance, such as oversight, management, and investment policies. The board ensures that the retirement system is fulfilling its statutory role and that it operates in the sole interest of the members and beneficiaries. The board also selects actuarial methods and assumptions and is responsible for how the pension fund is invested.

Pension systems rely on an array of external technical experts—for example, actuaries and oversight boards. In some states, the investment decisions of the pension fund are performed by a state agency that is external to the pension system.
Define Issues

Pension systems that experience substantial and persistent underfunding often exhibit an array of issues with their broader financial situation, workforce, and public services that complicate addressing the funding crisis. A foundational step for successful, long-term reform is understanding the scope and scale of the pension crisis and the circumstances surrounding it that may inform or possibly complicate the effectiveness of reforms.

THE CRISIS
A pension crisis is typically defined in terms of funding shortfalls, low funding ratios, and benefit generosity— if pension promises made to employees are not fully funded, it creates an unfunded liability. In some cases, employers may have sufficient funding flows to cover the liabilities associated with the current or future workforce but have insufficient funding to cover the costs of retirement benefits for current retirees who are eligible for benefits under discontinued (i.e., legacy) pension plans.

Pension crises are multifaceted and can be revealed in less obvious ways than funding shortfalls:

- A pension crisis can manifest itself in terms of an excessive budgetary burden, if employer or sponsor contributions compose an overly large share of the state or municipal budget.
- Pension contributions can also result in excessively high taxes on residents or can crowd out other priorities, such as other public services and infrastructure investments.
- A pension crisis can also result in benefit cuts and inadequate pension benefits that result in lower retirement security for affected employees or a lower-quality public-sector workforce with high attrition rates and poor recruiting.

The implication is that even states and municipalities with apparently healthy pension funding ratios can have unsustainable pension systems if the system results in these other concerns.

WHO IS AFFECTED AND HOW
Current and future public-sector retirees are not the only group at risk from pension crises—residents, taxpayers, and other stakeholders may face reduced public services or higher taxes:

- A pension crisis puts the pension benefits of current employees and possibly future employees at risk of being reduced in value. It also affects government employers to the extent that measures such as increased employer contributions are enacted to improve funding. Further, pension reforms designed to improve the pension funding status, including reductions in benefits, affect the retention of the workforce and the experience and quality of the workforce.
- If taxes are increased as a means of improving pension funding or if other public services are reduced so a greater share of the government budget can be diverted toward public pensions, then voters and residents are also affected and possibly the business community as well.
- The business community is also affected if pension fund investments are targeted to business enterprises in the state.
- Finally, the election prospects of elected officials will be affected by the pension crisis if lobbying groups are strongly focused on the issue.
THE INSTITUTIONAL AND LEGAL SETTINGS
Pension crises do not occur in a vacuum but will be affected by relevant governance structures and accounting practices and by which reforms are legally permitted. Because of the flexibilities and leniencies given to states and localities compared with those that govern the private sector, the institutional framework varies across states and localities and can vary over time for the same location:

● Although private-sector pensions are governed by federal law, state and local pensions are governed by a diverse set of laws and regulations set at the local level. Many have argued that the diverse legal frameworks across locations and the leniency in setting rules have contributed to the underfunding crisis among these plans. Differences in the legal setting across states also define which policy options can be pursued. For example, some states include constitutional protections of pension rights, while other states do not.

● Unlike private-sector pension plans, in which governance primarily resides with the employer, the governance of public pensions is dispersed among different stakeholders and decisionmakers, leading to questions about who is responsible for public pensions.

● In contrast to private-sector-defined benefit plans, public plans are given much more latitude in terms of setting actuarial assumptions, giving rise to the potential for opportunistic actuarial practices that can lead to reported levels of funding that downplay the magnitude of pension liabilities and lead to lower required contributions.

● Public plans across states and municipalities also have latitude in the selection of investment vehicles for investing public pension funds, allowing public pension fund managers to shift portfolios to higher-return but riskier asset classes.

PAST REFORMS
Many states and municipalities have already implemented an assortment of changes. Since the mid-2000s, the predominant type of benefit reform has been to reduce the generosity of benefits and increase contributions of employers and employees. Past benefit reforms may take years to see the financial impact. For example, reducing pension benefits for new hires will reduce long-run pension obligations but will not affect the underfunding of existing obligations.

Beyond benefit reforms, decisionmakers have pursued more-aggressive strategies, including using nontraditional investments, for pension funds as a means of increasing pension fund returns—for example, by increasing the share of assets invested in private equity and hedge funds. Others have restructured their unfunded pension obligations by issuing taxable pension obligation bonds and committing to a schedule of coupon and balloon payments.

Some states and localities have funded pension liabilities through budget cuts for other services, including reallocating funds toward pension funding and away from other services, adjusting the tax structure or rates, or even pursuing bankruptcy proceedings.

Stakeholders that have borne the brunt of past reforms may be less inclined to bear a substantial burden of future changes. Understanding past reforms provides context and limitations on new reforms.
Understand Causes

The causes of pension crises are complex and are as varied as the many states and localities that are facing these crises. Understanding the sources of the problem is important when identifying what policies to pursue to pay down unfunded liabilities, contain the negative consequences of the additional costs that are required, and achieve the other goals of reform.

There are five common causes of pension crises identified in the literature and raised by subject-matter experts.

LACK OF KNOWLEDGE AND EXPERTISE
Pensions design and funding issues are highly complex, and key stakeholders and decision-makers often lack the knowledge and expertise required for pursuing effective solutions to crises.

- Elected officials may lack expertise relevant to the pension crisis because they have more-pressing or politically prominent policy issues.
- Voters and residents may have limited expertise to assess the cost or benefit of public pensions, or they may place a higher priority on other public policy issues, which can make it difficult for them to hold elected officials accountable for pension-related policies, especially when pension costs are dispersed across many taxpayers.

ACTUARIAL ASSUMPTIONS
Pension boards determine the actuarial assumptions used in valuing pension funding and obligations, and these assumptions can be overly optimistic, resulting in an overstatement of pension funding and an understatement of future obligations. To calculate the contributions needed to sufficiently fund a state or municipal pension plan, actuaries must rely on a set of assumptions and models.

The discount rate assumption, which is used to compute the present value of promised benefits or the pension liability, has one of the largest effects on the size of the annual contribution the employer must make to fund benefits. A higher discount rate assumption reduces the present value of future liabilities, thereby making pension costs appear smaller.

As unfunded liabilities are rolled into the calculation of required contributions, assumptions surrounding the amortization of unfunded liabilities can determine whether required contributions are sufficient to cover any new liabilities. There are three main assumptions pertaining to amortization: the amortization period, whether the amortization is closed (i.e., set against a fixed date) or open (i.e., set against a fixed period), and the method for allocating costs over time (as a level dollar amount or as a level percentage of payroll).
Any of these assumptions carry the risk of being overly optimistic or being leveraged to defer pension payments, which could lead to negative amortization and, consequently, a further decline in pension system funding.

Other assumptions can affect estimates of future liabilities and revenues to cover those liabilities. **Economic assumptions** include the discount rate on future benefit payments, inflation rates, compensation growth, and payroll growth. **Demographic and other assumptions** include retirement rates, employee turnover, mortality rates, and household composition.

**MISTRUST AMONG STAKEHOLDERS**
The complexity of public pensions, the large number of stakeholders and decisionmakers, and the complexity of the institutional environment in which pensions are set means that effective pension policy requires close cooperation and productive coordination among different groups that may have differing objectives. Mistrust among key stakeholders or decisionmakers (e.g., public employee unions and elected officials) can lead to lack of cooperation and stalemates that prevent effective policies for addressing underfunding.

**OTHER TYPES OF DYSFUNCTIONAL GOVERNANCE**
Good governance of public pensions involves managing the pension system to provide high fund performance, meeting pension obligations, and doing so at a reasonable cost to all stakeholders. In contrast, lack of transparency, conflicts of interest, and poorly functioning processes can stymie effective management of public pensions.

Unlike private-sector plans, state and local plans are not subject to federal regulations regarding the fiduciary duties of those who govern the plan but are instead regulated by a patchwork of state and local laws and policies. In addition to the major concerns listed above, other governance issues include the following:

- The fiduciary duties of the organizations that govern pensions are not clearly defined.
- There is inadequate oversight, accountability, and transparency of the activities of the organizations and personnel involved with governance.
- Key personnel or organizations lack strong control over decisions related to asset management, actuarial assumptions, operations, and other management and administrative activities.
- Laws and regulations can impede the effectiveness or efficiency of the management and administration of the pension system.
Identify Goals

To ensure effective reform, it is important that pension systems identify the objectives of the reform effort. These goals can take the form of outcomes the system aims to achieve in the short and long term, as well as goals to improve the operations and processes that will facilitate reaching the outcome goals.

OUTCOME GOALS

The goal of reform is ultimately to improve outcomes by making pensions financially sustainable while providing the public workforce with retirement security and public-sector employers with an effective human resource management tool. Outcome goals reflect the various objectives of the different stakeholders in the pension system:

- **Attaining sustainable pension funding for the current and future workforce**: Some stakeholders assume that the goal is a 100 percent funding ratio, while others accept a less-than-full funding ratio. Less-than-full funding means that current workers and employers are paying prior obligations. Importantly, reforms today might not lead to quick solutions, but checking to make sure the general trend is toward paying down unfunded liabilities is an important goal.

- **Building resilience to market volatility**: A corollary to ensuring funding for benefit obligations is the goal to limit investment risk and volatility. That is, a plan’s future funding should be resilient to turbulent markets.

- **Attracting and retaining a high-quality workforce that meets public-sector needs**: Reforms that increase employee contributions or reduce pension generosity will lead to greater turnover and have the potential to decrease the experience mix of the workforce. Reforms must balance the needs of the public sector to attract and retain the workforce it needs against policies that improve pension funding.

- **Providing retirement security**: One of the primary goals of a retirement savings plan is to provide retirement income for its owner. Reforms that cut pension generosity adversely affect retirement wealth and may jeopardize workers’ ability to subsist at advanced ages.

OPERATIONAL AND PROCESS GOALS

An additional set of goals focuses on ensuring that the processes involved with running a pension system are effective and in place to avert future crises. Process goals may include developing strong governance practices and improving accounting practices, including realistic assumptions and appropriate methods. Averting future crises also involves creating a foundation of cooperation and trust among stakeholders and key personnel involved in the pension systems. Some examples include:

- having a board with limited conflicts of interest
- having a board with distinct fiduciary duties
- enacting laws that require the actuarially determined contribution to be paid
- using conservative actuarial assumptions.
Identify a Reform Strategy

Reform can take multiple paths and involve multiple initiatives, sometimes taken sequentially rather than simultaneously.

First, reformers should identify a menu of plausible and effective reforms that address the pension crisis causes and recognize potential trade-offs. Then, reformers should holistically evaluate the selected reforms and analyze them with respect to long-term consequences and resilience.

Identify a Menu of Targeted, Feasible Reforms

Feasibility of reforms varies based on the issues that define the pension crisis and the causes. The menu of reform options will typically fall into four broad categories.

**FIGURE 3**

PERCENTAGE OF STATES WITH A PENSION SYSTEM MAKING BENEFIT CHANGES TO CURRENT OR NEW EMPLOYEES, BY TYPE OF REFORM, 2009–2021

<table>
<thead>
<tr>
<th>Benefit reductions</th>
<th>Current employees</th>
<th>New employees</th>
<th>Current and new employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase employee contributions</td>
<td>56%</td>
<td>44%</td>
<td>70%</td>
</tr>
<tr>
<td>Increase age or tenure</td>
<td>18%</td>
<td>20%</td>
<td>24%</td>
</tr>
<tr>
<td>Increase years in final average salary</td>
<td>16%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Decrease multiplier</td>
<td>10%</td>
<td>10%</td>
<td>38%</td>
</tr>
<tr>
<td>COLA (limited, decreased, or suspended)</td>
<td>22%</td>
<td>38%</td>
<td>42%</td>
</tr>
<tr>
<td>Convert or offer option of DC or hybrid</td>
<td>6%</td>
<td>6%</td>
<td>26%</td>
</tr>
</tbody>
</table>

**SOURCES:** Compilation of policy reforms reported in Keith Brainard and Alex Brown, Spotlight on Significant Reforms to State Retirement Systems, National Association of State Retirement Administrators, December 2018, and updated to incorporate reforms from National Association of State Retirement Administrators, “Selected Approved Changes to State Public Pensions, 2019–Present,” July 2021, and an additional review of statewide system Annual Comprehensive Financial Reports (these reports are issued annually by all pension funds and contain financial results for the last fiscal year).

**NOTE:** A state is marked as having increased employee contribution rates or benefit reductions if at least one major statewide system (e.g., public employee retirement systems; teacher retirement systems; school employee retirement systems) has an increase in contribution rates or reduced benefits for a particular employee group. Employee groups are new employees hired on or after 2009 and current employees (e.g., an employee hired before 2009). COLA = cost-of-living adjustment; DC = defined contribution.
Benefit Plan Reforms
One area for potential reform is in the design and type of pension offered to employees. Figure 3 summarizes the frequency of different reforms since 2009. Benefit reform can help ensure sustainable funding goals by (1) increasing pension funding through increased contributions or (2) reducing pension costs by changing pension features or type. Reforms may include

- increased employer or employee contributions (the most common)
- benefit reductions (defined benefit [DB] plan benefit = benefit multiplier × service years × final salary)
  - require longer service or later ages to qualify for benefits (e.g., 35 service years instead of 30)
  - use a smaller benefit multiplier (e.g., 1.5 percent of final salary per year of service instead of 2 percent)
  - use a longer period to compute final salary (e.g., best eight years instead of best three years)
  - less generous cost-of-living adjustments in retirement
- changes in pension type—e.g., DB, defined contribution (DC), hybrid, or cash-balance plan.

It is important to pursue pension reforms that do not endanger the other outcome goals of recruiting and retaining a high-quality workforce and ensuring retirement security.

Public Finance Policy Changes
Another approach to support funding sustainability is to pursue alternative sources of revenue to fund pension obligations. These reforms may include

- changes to tax rates or tax structure
- cuts to funding for other public services
- issuance of pension obligation bonds
- revised investment strategies that utilize non-traditional or alternative investment classes
- bankruptcy (not available to states).

Actuarial Reforms to Improve Accuracy
Changing accounting assumptions, and accounting practices more generally, is another potential avenue for reform. These reforms can help achieve objectives related to improving operations and processes that have contributed to underlying causes of crises. Such reforms include the following:

- Set the discount rate for both current and legacy obligations to the risk-free rate.
- Update assumptions about the rate of return on assets and payroll growth to reflect recent experience and future plans.
Governance Reforms
Changes in the governance structure and oversight of pension systems are another area for potential reform that can improve operations and processes that contribute to the causes of pension crises. Governance reforms may include

- clearly defining fiduciary duties
- ensuring that pension system administrators and managers have the requisite expertise they need
- identifying clear lines of authority
- establishing rules for accountability and transparency
- minimizing agency problems related to misaligned incentives and conflicts of interest
- developing internal systems to ensure operational effectiveness and efficiency
- creating strong and balanced controls.

The path toward effective reform will require understanding the trade-offs of different policies and reform efforts in terms of their effects on outcomes and achievement of specific goals, their cost to different stakeholders, and the time horizon over which effects and costs are realized. Research on these effects is still needed.

ANALYZE SELECTED REFORMS
After identifying feasible reforms, those reforms must be evaluated to ensure that they can be effective at meeting the outcome and process goals. Such evaluation may require analysis from technical experts. The choice of reforms from the menu of options should reflect a consideration of the whole set of reforms to guarantee that they are not at odds with one another or, to the degree there are trade-offs, that they are balanced in consideration of the overall goals and the involved stakeholders.

Two important things to incorporate into an analysis of reform options are (1) long-term consequences and (2) resilience. Many reform options have long-term impacts that, while not realized today, will affect government operations and pension plan funding in the future (see an example in the box). Unexpected events, such as unusual investment volatility, can lead to abrupt disruptions to reform plans. Stress testing an investment portfolio or other key assumptions (e.g., payroll growth, longevity) can shape the reforms chosen to ensure resilience in the face of that uncertainty.
STEP 5

Ensure Smooth Implementation of Reforms

A considerable body of research has been conducted on implementation science and the steps for successful implementation of change.

This step of the road map draws from a RAND-designed toolkit developed for implementing successful reforms in the context of better policing. Key elements of successful implementation include the following:

- **Identify a leader**, such as an individual or group from the relevant legislature or executive branch, who will act as navigator throughout the implementation process.

- Build partnerships with stakeholders by providing **ongoing communication** through all phases of implementation and provide channels to receive feedback. Be sure to **log and act on all feedback** received.

- Support **consistent problem-detection and problem-solving capabilities**, such as documenting planned changes; conduct **careful data analysis** to detect and resolve problems; and **track progress and problems**.

- Consider implementation as a project and use **project management capabilities** that are available in the public domain, such as those available via the Project Management Institute professional association.

- Also **make use of change management capabilities and resources** available online to identify best practices.

- **Incorporate program evaluation** into the implementation process. This involves collecting data and implementing the reforms in such a way that rigorous analysis can be conducted on whether the reform worked and how it might be improved.

The toolkit also identifies some common challenges that prevent successful reform and provides tips for addressing them.
Example Pension Crisis in Which Funding Issues Are Noncritical

1 ISSUES

- The crisis:
  - Pension system funding is at 70 percent and has been declining.
  - The plan sponsor has been making the annual required contributions.
  - The pension base has been constant.
  - Forecasted contributions suggest that employers will need to substantially increase their contributions.
- The affected parties are government employees and employers, taxpayers, beneficiaries of government services, elected officials.
- Institutional and legal setting:
  - Pensions are protected by laws pertaining to contractual agreement but only for benefits accrued.
  - The board consists of two membership representatives, two employer representatives, and two representatives appointed by the governor.
  - The board defers to recommendations of the pension system’s executive director.
- No major pension reforms have passed, although there has been discussion and significant debate.

2 CAUSES

- Past high discount rate assumptions and assumptions about growth in the size of the labor force have made annual required contributions artificially low. This potentially reflects lack of knowledge and expertise, incorrect actuarial assumptions, and dysfunctional governance.
- Investments have performed below the long-term rate of return for the past decade. This potentially reflects poor luck, misaligned incentives, and dysfunctional governance.
- There has been a lack of action. This potentially reflects dysfunctional governance and mistrust among stakeholders.

3 GOALS

- Outcome goals:
  1. Limit the impact of the pension system underfunding on the volatility of the sponsor’s annual budget.
  2. Reach 100 percent pension system funding.
  3. Ensure the pension system’s resilience to market volatility.
  4. Reach consistency of contributions for employers.
  5. Achieve workforce stability.
- Process goals:
  1. Provide for gradual changes in reform for all stakeholders.
  2. Limit conflicts of interest on the board.
  3. Establish standards to ensure that appropriate contributions are made.
  4. Establish conservative actuarial assumptions.

4 IDENTIFY A REFORM STRATEGY

Menu of Feasible Options

As shown in Table 1, the various reform options identified to address the pension crisis will support some goals and negatively affect other goals. In some cases, there are mitigations that will help to overcome these harms.

Evaluation of Reforms

- An impact analysis of each reform option reveals that reform option B would have minimal impact on the underfunding situation in the short run.
- In consideration of the collective set of options, a mix of increased contributions (reform option A) and higher taxes (reform option C) represents a better sharing of the burden than cutting benefits (reform option B).
- Reform options D and G are determined to be politically infeasible.
- Reform options E and F are determined to have minimal cost and so are included.
- Final plan: Reform options A, C, E, and F will be pursued. The outcome goals are balanced, but only some of the process goals will be achieved.

5 IMPLEMENTATION PLAN

- Identify a leader or navigator.
- Communicate the plan to stakeholders and build partnerships where possible.
- Incorporate program evaluation into the implementation process.
- Identify future points when progress toward the goals should be evaluated.
REFORM OPTION CONTRIBUTES TO HARMS MITIGATIONS
A. Increase contributions Outcome goal 2 Outcome goals 1 and 4 Establishing a gradual process (process goal 1) can mitigate the harm to outcome goals 1 and 4 but will slow outcome goal 2. Increasing plan sponsor revenues can mitigate the harm to outcome goals 1 and 4.

B. Decrease benefit generosity for new hires and cost-of-living adjustments for current beneficiaries Outcome goal 2 Outcome goal 5 Increasing current compensation can mitigate harm to outcome goal 5.

C. Increase taxes or reduce public services Outcome goal 1 Supporting mitigation actions for reform options A and B can mitigate harm to outcome goal 1.

D. Change board structure to require impartial appointments with fiduciary responsibility Process goals 2, 3, and 4

E. Require external audits of actuarial assumptions Process goal 3

F. Require third-party reviews of investment allocations Outcome goal 3

G. Establish long-term goals for investment return planning that decrease discount assumptions Process goal 4 Outcome goals 1, 2, and 4 Establishing a gradual process of reducing the discount assumption that coincides with increased contributions can mitigate harm to outcome goals 1 and 4.

TABLE 1
MENU OF FEASIBLE OPTIONS
Notes


This brief describes work done in the RAND Center for Global Risk and Security and documented in Causes and Consequences of the Crises in State and Local Pension Funding: Research to Inform the Development of a Road Map for Reform, by David Knapp, Beth J. Asch, Philip Armour, and Zhan Okuda-Lim, RR-A2307-1, 2023 (available at www.rand.org/t/RRA2307-1). To view this brief online, visit www.rand.org/t/RBA2307-1. The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. RAND® is a registered trademark.

Limited Print and Electronic Distribution Rights: This document and trademark(s) contained herein are protected by law. This representation of RAND intellectual property is provided for noncommercial use only. Unauthorized posting of this publication online is prohibited; linking directly to this product page is encouraged. Permission is required from RAND to reproduce, or reuse in another form, any of its research documents for commercial purposes. For information on reprint and reuse permissions, please visit www.rand.org/pubs/permissions.


© 2023 RAND Corporation