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Why States Save

Using Evidence to Inform How Large Rainy Day Funds Should Grow

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Overview

In recent years, Texas' Economic Stabilization Fund has been at the center of a heated debate. As of early 2015, the account balance stood at $7.5 billion, or 15 percent of the state's General Fund expenditures, making Texas' rainy day fund the nation's second-largest in dollar terms.[1] Given the state's other pressing budgetary priorities—particularly the need for improved water and transportation infrastructure and a desire to reduce the state's total amount of outstanding debt—Texas lawmakers have been divided over whether the current level of reserves is sufficient or excessive.

At the heart of this debate lies a basic disagreement over the intended purpose of the Economic Stabilization Fund. "It's become a surprisingly emotional issue in the political debate," said Dale Craymer, president of the nonprofit Texas Taxpayers and Research Association and a former legislative aide who helped House leaders draft the 1987 constitutional amendment that created the fund. "The last two sessions, the rainy day fund has taken on this sacred nature that was never really intended. It was intended as a management tool."[2]

As revenue and spending pressures shift along with the booms and busts of the economy, states stand to benefit from the additional flexibility provided by robust rainy day funds to smooth over unexpected bumps in the road. Despite having billions of dollars in its rainy day fund, Texas struggles to answer the question of how much is enough because the state lacks a clear consensus on why the fund exists in the first place. Absent a clear purpose for saving, other states also find it extremely difficult to set a meaningful savings target, which can confound their efforts to manage the budgetary ups and downs of economic activity.

To help leaders craft effective policies for their states' rainy day funds, The Pew Charitable Trusts examined the statutory or constitutional language governing these funds and the trends in their balances. The research found that:

- Out of the 46 states with rainy day funds, more than half—27—do not clearly express in state law what they are seeking to achieve with them. Only one state—Minnesota—sets the level of budgetary risk it wishes to offset by having a fund.
- During the growth years of the mid-2000s, rainy day funds in 21 states were prevented from growing larger because balances quickly swelled to their maximum levels, which resulted in most of those states relying more heavily on spending cuts and tax increases to balance their budgets during and after the Great Recession.
- Only five states—Connecticut, Minnesota, Nebraska, Oregon, and Utah—currently require by law regular, periodic evaluations of revenue volatility patterns in order to determine a sufficient maximum or targeted balance for their funds. The remaining 41 states with rainy day funds do not have a process for re-examining the size of their funds in response to changing fiscal and economic conditions.

In order to arrive at an optimal savings target, Pew recommends that state policymakers consider three factors:

1. **The fund's purpose.** In order to make evidence-based determinations about how much to save, policymakers must first decide what they want to accomplish with the fund and how and when its balances should be drawn upon. To that end, the fund should have an explicit purpose that should be narrowly defined in law.
2. **The volatility of the state's revenue.** States should study how their revenue systems react to the ups and downs of the business cycle so they can align their savings target with the state's historical experience with volatility. If the purpose of the fund encompasses spending considerations such as maintaining program funding commitments or overall state spending at a certain level, the analysis should incorporate those factors as well. Rigorous examination of historical data on revenue volatility is essential to developing an evidence-based savings target.

3. **The degree of risk the state wishes to offset.** Some states use their savings to cushion the impact of budget cuts in response to a recession, while others strive to put away enough to avoid cuts altogether. Still others may want to save more to offset large, mandatory spending commitments on entitlements or other spending pressures that may arise. Clear parameters can provide guidance to policymakers as they determine how much a state needs to save in order to achieve its goals.

This report highlights the challenges states face in determining how much to save in their rainy day funds, gives examples of states with strong policies and processes for setting their savings targets, and offers recommendations for how policymakers can strengthen their funds in order to better manage volatility and plan for the future.

Most states lack a clear rationale for saving

In many states, reserves have proved inadequate during recessions, in part because no clear purpose guides rainy day fund policies. When a state's reasons for saving are either unstated or poorly defined, policymakers lack the information necessary to match savings goals to needs, making it difficult to determine how much their state should save. For example, a state that only intends to use reserves to fill midyear shortfalls in an already approved budget may need to save less than a state that wants to use reserves prospectively to smooth spending across multiple budget cycles.[3]

In Wyoming, where lawmakers are debating the ideal savings target for the state's Legislative Stabilization Reserve Account, the statute that created the fund provides no guidance on its intended use. As a result, Governor Matt Mead has said the debate has raised basic questions: "What's the rainy day fund for? How much should we have in savings?"[4] Some Wyoming lawmakers would like the fund restricted to significant crises, such as a national recession. Others would like to see the account grow to a balance equivalent to a two-year budget for the state, providing a substantial insurance policy against scenarios such as a sustained fall in energy prices—a major risk given Wyoming's reliance on severance tax revenue that is generated by natural resource extraction and energy production activities. The impact of the state's reliance on severance revenue is illustrated by its 17-year revenue drought during the last sustained downturn in energy prices, when tax receipts did not return to their inflation-adjusted 1983 levels until 2000.[5] Still others argue that the fund, at $1.8 billion at the start of fiscal year 2016, has grown large enough to hedge against the state's level of budgetary uncertainty and that spending priorities such as infrastructure should take priority over further savings.[6]

How states define purposes of rainy day funds

States do not share a common purpose for saving, nor do they define their rainy day funds in the same way. For this study, Pew divided state statutes defining the purpose of rainy day funds into two sets of categories: explicit or implied purposes, and narrow or broad definitions. These categories describe the circumstances the fund is intended to address (purpose) and the circumstances under which the fund can be used (definition).

Pew classified states with distinct statutory or constitutional language describing the intended purpose for their rainy day fund—which is separate from language governing fund withdrawals—as having an explicit purpose. Of the 46 states with rainy day funds, 22 define an explicit purpose in statute for at least one of their rainy day funds.

Explicit fund purpose: Indiana

> "A counter-cyclical revenue and economic stabilization fund is established to assist in stabilizing revenue during periods of economic recession."[7]

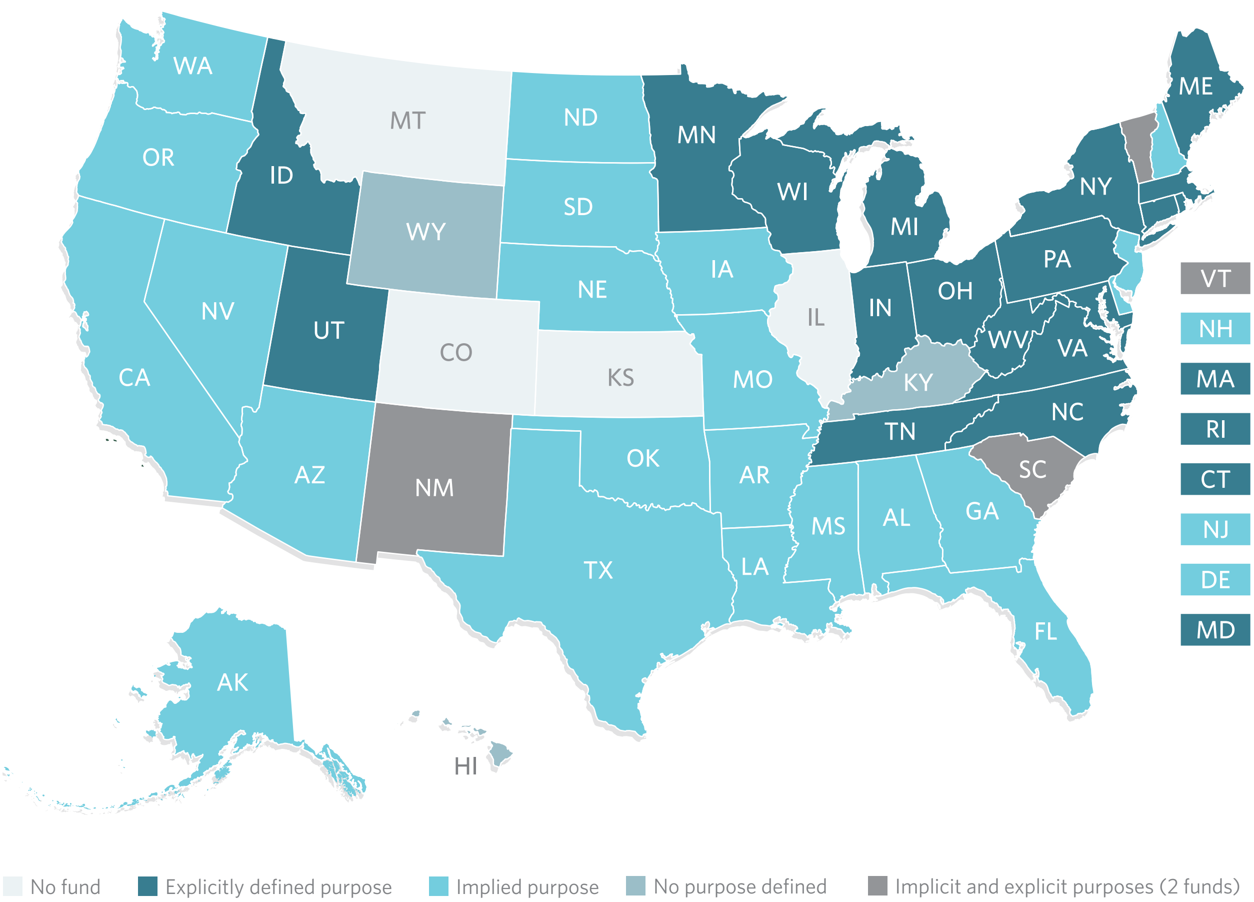
In contrast, most states do not separately state in law a purpose for their fund. Instead, these states only provide statutory or constitutional language governing conditions under which withdrawals can be made. These conditions are identified as providing an implied purpose. Twenty-two states are categorized as having a rainy day fund purpose that is implied.[8]

Implied fund purpose: New Jersey

> "Balances in the 'Surplus Revenue Fund' may be appropriated by the Legislature only: a. upon separate certification by the Governor that anticipated revenues in the General Fund are estimated to be less than those certified by him upon approval of the annual appropriation act; or b. upon a finding by the Legislature, based on its research, that to offset revenue declines anticipated in the General Fund an appropriation from the 'Surplus Revenue Fund' is a more prudent fiscal policy than imposing new taxes or increasing any rate of tax or otherwise modifying the tax structure, including elimination or modification of deductions, exclusions or exemptions."[9]

Figure 1

The Purpose of Most State Rainy Day Funds Is Implied, Not Explicit



Pew also considered whether a fund's rationale is narrowly or broadly defined. A state that sets forth a clear or measurable objective that leaves little doubt as to the circumstances under which the fund balance can be used is identified as having a narrow definition. Thirty-four states provide a narrow definition for at least one rainy day fund.

Narrow definition: Michigan

> "A countercyclical budget and economic stabilization fund is created to assist in stabilizing revenue and employment during periods of economic recession and high unemployment."[10]

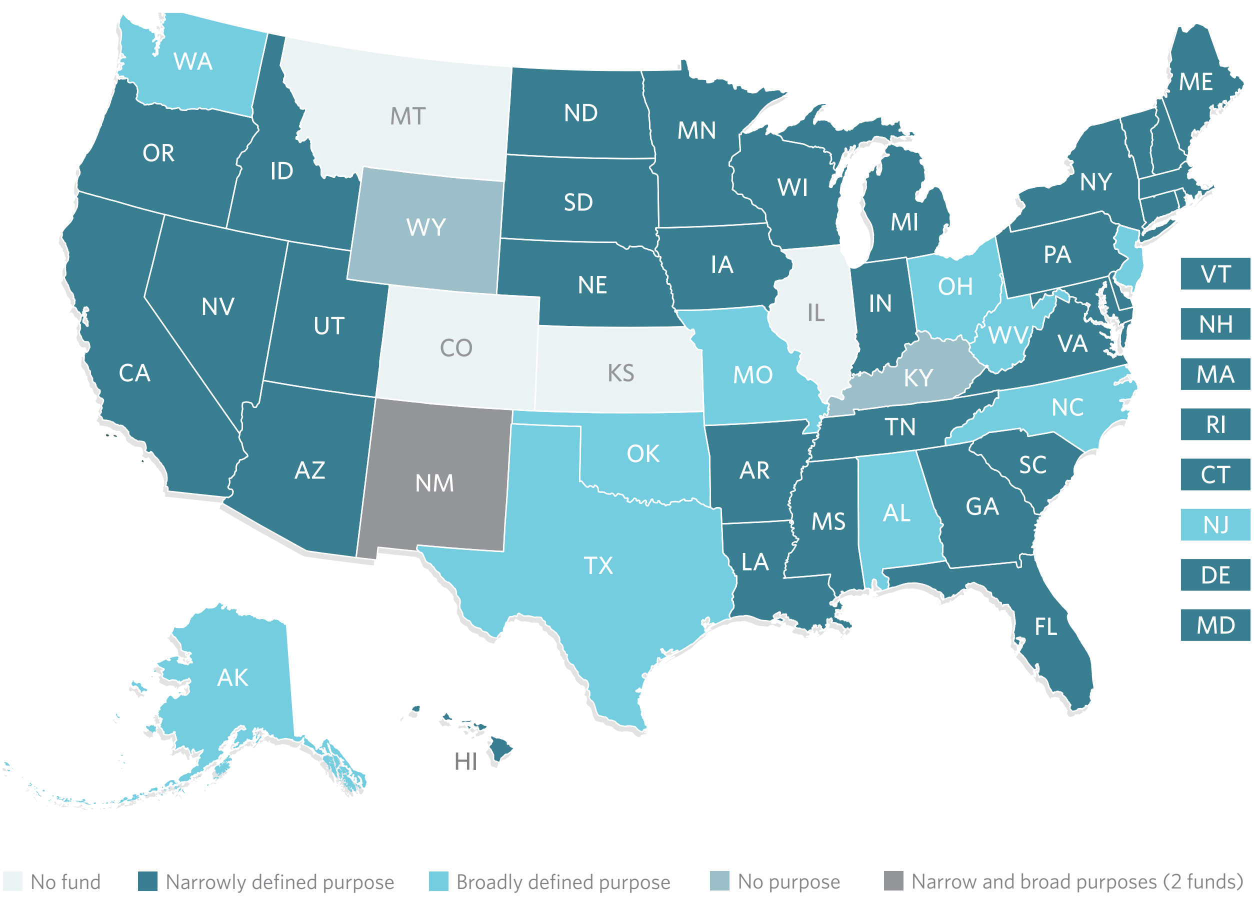
States that set forth expansive and nonspecific reasons for their rainy day funds are identified as having a broad definition. Ten states have broad definitions for at least one rainy day fund.[11]

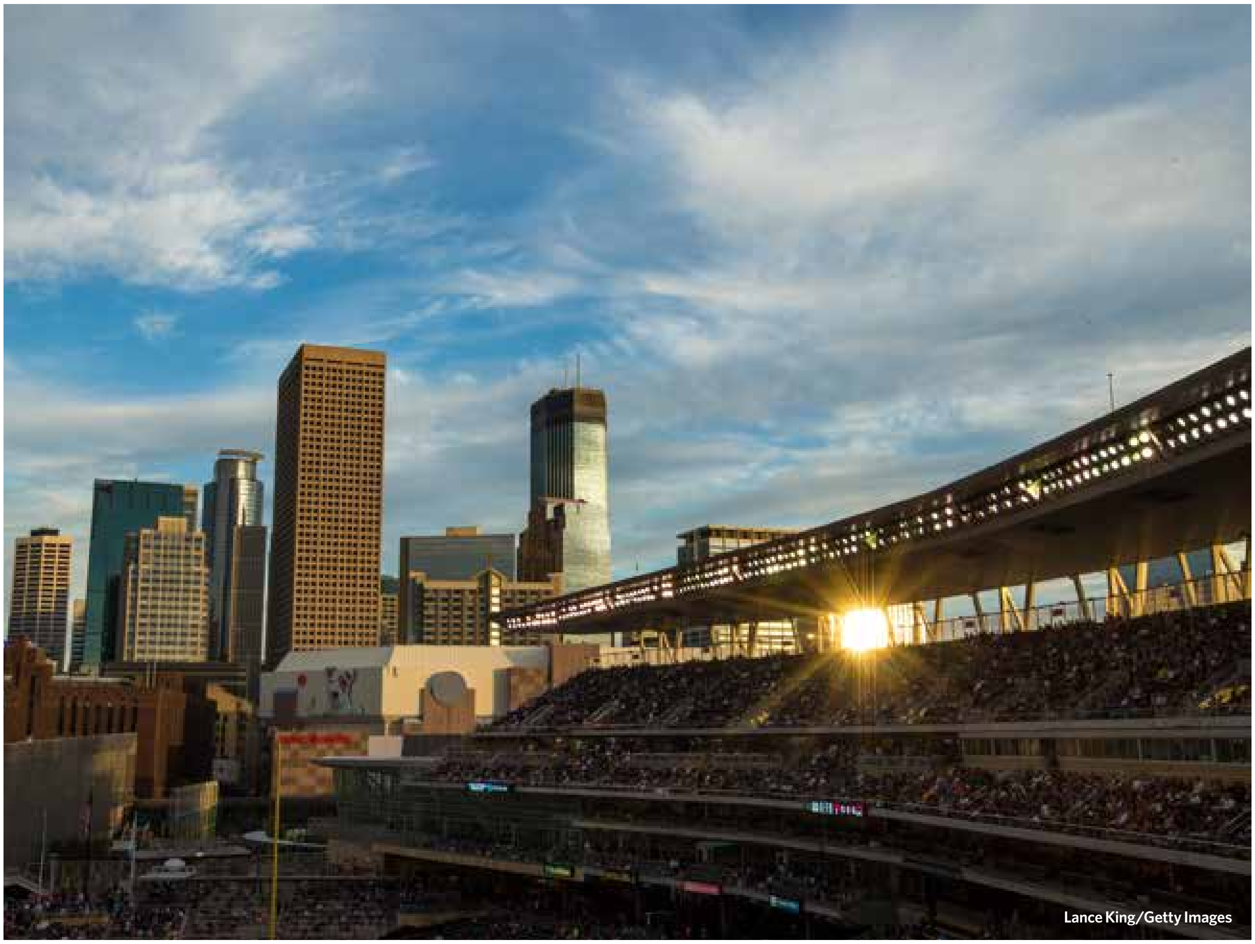
Broad definition: New Mexico

> Withdrawals can be made from the Tax Stabilization Reserve "if the governor declares that the expenditure is necessary for the public peace, health and safety."[12]

Figure 2

Narrowly Defined State Rainy Day Funds Help in Setting the Right Savings Target





Minnesota's evidence-based savings target draws on the explicit and narrowly defined objectives for the state's rainy day fund.

Although there are advantages and disadvantages with each approach to purpose and definition, states benefit from funds that are categorized as both explicit and narrow. For example, Maryland statute describes discrete objectives for the state's rainy day fund, stipulating that it "is established to retain State revenues for future needs and reduce the need for future tax increases by moderating revenue growth."[13] All in all, 19 states describe their funds in terms that are explicit and narrow, providing the clearest guidance to policymakers for determining an evidence-based savings target.

Virginia and Minnesota offer two examples of states with strong savings determinations that draw on explicit and narrowly defined objectives for their rainy day funds. In Virginia, "the only use for the revenue stabilization fund in the constitution is [to fill] a shortfall in an enacted budget," said Virginia Secretary of Finance Ric Brown, emphasizing that legislators cannot use money from the reserve fund prospectively (i.e., when building a budget for the coming fiscal year).[14] In contrast, Minnesota's rainy day fund is intended to maintain a historically sustainable trend in state expenditures. By law, the state's budget reserve "may be used when a negative budgetary balance is projected and when objective measures, such as reduced growth in total wages, retail sales, or employment, reflect downturns in the state's economy."[15] Although they differ in how they use their funds, both states find that decisions about how much to save have been relatively more straightforward compared with states that have less clearly defined objectives.

Table 1

Clarity of Rainy Day Fund Objectives Ranges Widely

Definition	Purpose	
	Explicit	Implied
Narrow definition	Connecticut	Arizona
	Hawaii	Arkansas
	Idaho	California
	Indiana	Delaware
	Maine	Florida
	Maryland	Georgia
	Massachusetts	Iowa
	Michigan	Louisiana
	Minnesota	Mississippi
	New Mexico*	Nebraska
	New York	Nevada
	Pennsylvania	New Hampshire
	Rhode Island	North Dakota
	South Carolina*	Oregon
	Tennessee	South Dakota
	Utah	
	Vermont*	
	Virginia	
	Wisconsin	
Broad definition	North Carolina	Alabama
	Ohio	Alaska
	West Virginia	Missouri
		New Jersey
		Oklahoma
		Texas
		Washington
No purpose or definition	Kentucky, Wyoming	
No fund	Colorado, Illinois, Kansas, Montana	

*New Mexico, South Carolina, and Vermont each have additional rainy day funds that would fall into different categories.

In states where funds are not both explicitly and narrowly defined, identifying parameters for a savings target can be less clear-cut. Delaware, for example, is classified as having an implied purpose, drawn from its withdrawal rule, rather than an explicit one. Yet the state is also classified as having a narrow definition, as the withdrawal statute makes apparent that Delaware's rainy day fund should be used to fill a revenue shortfall:

> "The General Assembly by a three-fifths vote of the members elected to each House, may appropriate from the Budget Reserve Account such additional sums as may be necessary to fund any unanticipated deficit in any given fiscal year or to provide funds required as a result of any revenue reduction enacted by the General Assembly."[16]

West Virginia, however, has an explicit purpose but broad definition, allowing for withdrawals from its Revenue Shortfall Reserve Fund "for revenue shortfalls, for emergency revenue needs caused by acts of God or natural disasters or for other fiscal needs as determined solely by the Legislature."[17] This language does not provide clearly measurable conditions for the fund's use, making it more difficult to determine an adequate savings target.

Whether a fund's purpose is explicit or implicit, states have an easier time setting the right savings target if the definition is drawn narrowly; funds with multiple aims or no prioritization, on the other hand, can make it difficult for policymakers and analysts to ascertain what level of savings is required.

States With More Than One Reason for Saving

Twenty-five states designate multiple reasons for their funds, providing a variety of situations that reserves should address. Establishing more than one reason for saving can give states flexibility in using reserves; however, in order to best estimate an optimal savings target, states should strive to define these multiple reasons as narrowly as possible. Having more than one stated fund purpose can complicate the effort of estimating the right fund target, but it should be possible if those reasons for saving are narrowly defined. In Hawaii, for example, the Legislature may make appropriations for four reasons:

> " (1) To maintain levels of programs determined to be essential to public health, safety, welfare, and education;
>
> "(2) To provide for counter cyclical economic and employment programs in periods of economic downturn;
>
> "(3) To restore facilities destroyed or damaged or services disrupted by disaster in any county; and
>
> "(4) To meet other emergencies when declared by the governor or determined to be urgent by the legislature."[18]

This provides a set of measurable, easily communicated conditions when rainy day fund reserves should be used. Similarly, California's Budget Stabilization Account can be utilized

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under two so-called "budget emergency"[19] scenarios. One definition refers to man-made or natural disasters:

> "The existence, as declared by the Governor, of conditions of disaster or of extreme peril to the safety of persons and property within the State, or parts thereof, caused by such conditions as attack or probable or imminent attack by an enemy of the United States, fire, flood, drought, storm, civil disorder, earthquake, or volcanic eruption."[20]

The state also allows for a fiscal crisis to constitute a budget emergency:

> "A determination by the Governor that estimated resources are inadequate to fund General Fund expenditures for the current or ensuing fiscal year ... at a level equal to the highest amount of total General Fund expenditures estimated at the time of enactment of any of the three most recent Budget Acts."[21]

Despite the difference in these two purposes, each provides clear guidance regarding the conditions under which reserves can be spent. This allows the state to use a single fund to protect against genuine disasters and prospective budgetary shortfalls.

Notably, one state that has struggled with fund clarity made significant progress this year. Connecticut lawmakers enacted substantial reforms to the state's Budget Reserve Fund in the fiscal 2016-17 state budget, including a significant amendment to the fund's statutory purpose. The state's prior statutory language, which follows, did not explicitly define the fund's aim or what kinds of deficit situations the fund was intended to address—for example, whether it could be used to address shortfalls resulting from forecasting errors, economic downturns, or both:

> "When in any fiscal year the Comptroller has determined the amount of a deficit applicable with respect to the immediately preceding fiscal year, to the extent necessary, the amount of funds credited to said Budget Reserve Fund shall be deemed to be appropriated for purposes of funding such deficit."[22]

By contrast, the budget bill signed into law in June 2015 establishes a clear, distinct statement of purpose for the Budget Reserve Fund:

> "Moneys in the Budget Reserve Fund shall be maintained and invested for the purpose of reducing revenue volatility in the General Fund and reducing the need for increases in tax revenue and reductions in state aid due to economic changes."[23]

Unlike the previous language, the new text explicitly tasks the Budget Reserve Fund with addressing fiscal imbalances caused by economic conditions. This change provides clearer guidelines to lawmakers about when they should withdraw reserves and just how large the fund should be.

For Rainy Day Funds, Consider Both Policy and Practice

The purpose of a fund as defined in statute may not reflect how the fund is actually used. New York's law says the state's two funds—the Tax Stabilization Reserve Fund and the Rainy Day Reserve Fund—should be used primarily for the stabilization of tax revenue,[24] in the case of the first fund, and during economic downturns or catastrophic events, in the case of the second.[25] However, as highlighted by the Citizen's Budget Commission of New York, an independent policy research and monitoring organization, the state can borrow money from either fund as long as the loan is repaid within the current fiscal year. In recent times, the state has therefore used both rainy day funds primarily for short-term cash flow needs, drawing down the entirety of the balances at the beginning of each fiscal year.[26] As a result, New York's reserves have not been used to stabilize revenue during downturns in over two decades because when the state has needed to access the reserves during a downturn, no funds have been available.

Arizona's statute outlines a process for comparing current revenue to that of the previous seven years to determine when the state should deposit or withdraw funds from its Budget Stabilization Fund. However, that calculation is only a recommendation; the decision of whether and how much to deposit or withdraw is in the hands of the Legislature and the governor. "I think over the life of the program, only a few times have we ever followed the formula—I don't know how many, maybe two, three times since 1992," said Hans Olofsson, the chief economist with the state's Joint Legislative Budget Committee.[27]

With rainy day funds, both policy and practice matter. Multiple credit rating agencies have indicated to Pew that they consider both the legal guidance surrounding these funds as well as a state's individual histories of deposits and withdrawals when assigning debt ratings to a state.[28]

States struggle to determine how much to save

All state tax revenue has some degree of sensitivity to the business cycle. As Pew has documented in "Managing Uncertainty" (2014) and in two joint reports with the Rockefeller Institute of Government, *Cracks in the Crystal Ball* (2011) and "Managing Volatile Tax Collections in State Revenue Forecasts" (2014), recent evidence suggests that state tax collections have grown more volatile over the past decade. Shifts in personal income toward capital gains, greater reliance on revenue from extractive industries, and a narrowing of the sales tax base due to online sales and untaxed services all contribute to this increasing volatility.[29]

This uncertainty makes it a challenge for policymakers to determine what level of savings is necessary to effectively manage the ups and downs of the business cycle. For example, during the growth years of the mid-2000s, the rainy day funds in 21 states hit their savings targets or caps—statutory or constitutional maximums for the funds, often calculated as a percentage of revenue or appropriations.[30] Pew's examination of states' revenue shows that many states could have saved more during this period and that these additional savings would have aided them when the Great Recession hit.[31] In the aftermath of the recession, 16 states, including 11 that hit their rainy day fund limits during the mid-2000s, increased their caps or savings targets in recognition of the fact that their reserves were inadequate for a significant economic downturn.

Table 2

16 States Increased Statutory Maximum or Target Balances After the Great Recession

State	Hit maximum balance in mid-200s	Previous maximum balance	New maximum or target balance
California*	No	5% of current fiscal year's General Fund revenue	10% of current fiscal year's General Fund revenue
Connecticut	No	10% of current fiscal year's General Fund appropriations	15% of current fiscal year's General Fund appropriations†
Georgia	Yes	10% of previous fiscal year's revenue	15% of previous fiscal year's revenue
Idaho	Yes	5% of General Fund revenue	10% of General Fund revenue
Maine	No	12% of General Fund revenue	18% of General Fund revenue
Minnesota	Yes	$653 million	$811 million‡
Nevada	No	15% of General Fund appropriations	20% of General Fund appropriations
New York*	Yes	3% of projected General Fund appropriations in next fiscal year	5% of projected General Fund appropriations in next fiscal year
North Dakota	Yes	5% of current General Fund appropriations	9.5% of current General Fund appropriations
Ohio	No	5% of previous fiscal year's General Fund revenue	8.5% of previous fiscal year's General Fund revenue
Oklahoma	Yes	10% of General Fund revenue	15% of General Fund revenue
South Carolina*	Yes	3% of General Fund revenue	5% of General Fund revenue
Tennessee	Yes	5% of estimated tax revenue allocated to General Fund and Education Trust Fund	8% of estimated tax revenue allocated to General Fund and Education Trust Fund
Utah	Yes	6% of General Fund appropriations	9% of General Fund appropriations
Vermont*	Yes	1% of previous fiscal year's General Fund appropriations	5% of previous fiscal year's General Fund appropriations
Virginia	Yes	10% of average revenue collections for preceding three fiscal years	15% of average revenue collections for preceding three fiscal years

* indicates states that have more than one rainy day fund.

† Connecticut's new maximum balance is effective in fiscal year 2020.

‡ Because Minnesota's Budget Reserve Account was reformed in 2014, the figure cited no longer represents the maximum balance. Instead, $811 million represents a level up to which surplus state revenue should be automatically deposited in the Budget Reserve Account. The effective savings target for the account includes additional deposits and sits at a higher level determined by Minnesota Management &

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Budget (MMB) and is updated periodically throughout the fiscal year. As of October 2015, the funded level for the account is $994 million. Further, in its September 2015 "Budget Reserve Report," MMB recommends a combined $2.03 billion savings target for the Budget Reserve Account and the separate Cash Flow Account in the fiscal 2016-17 biennium.[32]

Note: California increased the target for its Budget Stabilization Account but did not modify its Special Fund for Economic Uncertainties. New York raised the target for its Rainy Day Reserve Fund but did not modify the target for its Tax Stabilization Reserve Fund. South Carolina increased the target for its Capital Reserve Fund but did not change the target for the General Reserve Fund. Vermont raised the target for its General Fund Budget Stabilization Reserve but did not alter its Rainy Day Reserve's target.

Sources: California Const. Art. XVI, § 20(e) (2015), as amended by Proposition 2 (Legislative Constitutional Amendment), approved Nov. 4, 2014; Connecticut Gen. Stat. § 4-30a (2015), as amended by Connecticut Pub. L. No. 15-244 (2015); Georgia Code Ann. § 45-12-93 (2015) as amended by Senate Bill 421 (2010); Idaho Code § 57-814 (2015), as amended by Senate Bill 1408 (2014); 5 Maine Rev. Stat. § 1532(1) (2015), as amended by Maine Pub. L. 2015, Ch. 267; Minnesota Stat. § 16A.152 (2015), as amended by H.F. 1777 (2014); Nevada Rev. Stat. Ann. § 353.288 (2014), as amended by Assembly Bill No. 165 (2009); New York State Fin. Law § 92-cc (2015), as amended by Senate Bill 4610-A (2015); North Dakota Cent. Code, § 54-27.2-01 (2015), as amended by North Dakota Session Law 2007, ch. 26 and North Dakota Session Law 2011, ch. 483; Ohio Rev. Code Ann. § 131.44 (2015), as amended by House Bill 64, Main Operation Budget FY2016-FY2017 (2015); Oklahoma Const. Art. X, § 23 (2015), as amended by Enrolled Senate Joint Resolution No. 51 (2010); South Carolina Const. Ann. Art. III, § 36(A) (2015), as amended by S.0006 (Ratification No. 172, Act 152) (2012); Tennessee Code Ann. § 9-4-211 (a) (2) (2015), as amended by 2013 Tennessee Public Acts, ch. 175; Utah Code Ann. § 63J-1-312 (3) (a) (ii), as amended by H.B. 333 Budget Reserve Account Amendments (2015); Vermont Stat. Ann. tit. 32, § 308(b) (2015), as amended by Vermont H.781 (2012); and Virginia Const. Art. X, § 8 (2015), amended by Virginia Session Law 2010, ch. 606.

Whether a state has other reserve funds addressing specific programmatic areas also influences a rainy day fund balance's ideal size. Many states, for example, have dedicated education reserve funds, and a few have funds directed to Medicaid spending or disaster relief. The existence of these additional funds may affect the overall scope of activities that a general rainy day fund is expected to address. If state leaders see their various reserve funds as complementary, they may prefer to consider all reserve fund balances in total when determining a savings target, as is done in Minnesota.[33] In other states, such as Utah, policymakers' preference may be to assess funds separately, given restrictions on the withdrawal and use of fund balances.

Most states' savings targets do not reflect revenue volatility

States often neglect to consider their level of revenue volatility when setting savings targets; Pew's analysis of the statutory or constitutional language governing rainy day funds found that few states mandate a process requiring that data on revenue and economic performance be used to determine how much the state saves. Furthermore, Pew researched whether states with higher levels of revenue volatility have larger savings targets or maximum balances and found no meaningful connection.[34]

These pieces of evidence, along with conversations with state policymakers, indicate that most states base their caps on arbitrary benchmarks or what is politically palatable in lieu of empirical observations about their level of revenue volatility and budgetary risk. In Idaho, for example, lawmakers in 2014 increased the cap for the state's rainy day fund from 5 percent to 10 percent. This new cap, however, was not the result of an evidence-based assessment of the state's reserve needs but was instead a figure acceptable to policymakers across the political spectrum. "We knew that 5 [percent] wasn't enough," said Idaho Budget Director Jani Revier, "but 10 percent does not reflect any best management practice on the appropriate amount of money set aside. Rather, it is more a number that there was consensus behind and we were comfortable with."[35]

Setting a Floor—but No Ceiling—for Texas' Economic Stabilization Fund

In November 2014, Texas voters approved a ballot proposition diverting a significant share of severance tax revenue in excess of historic collections that previously went to the Economic Stabilization Fund to highway spending. Legislation was then passed that requires a committee of 10 state legislators to determine the minimum balance of the stabilization fund, considering historic fund usage, highway budget pressures, and the state's financial condition. The committee met for the first time in December 2014 and set a minimum balance of $7 billion for fiscal 2015, 2016, and 2017.[36] However, the maximum balance for the fund is not revisited periodically in a similar fashion. Since debate over how best to use Texas' massive fund balance continues, the state stands to benefit from greater clarity about why it saves so successfully as well as how much budgetary risk it wishes to guard against.

Budgetary risk should inform policy

Understanding a state's experience with revenue volatility is an important step in determining the right savings target. However, this determination should also consider what level of budgetary risk policymakers wish to offset—or how much of a hypothetical shortfall they intend to fill. In doing so, states should consider both their revenue volatility and their spending commitments, including mandatory spending on major programmatic areas such as Medicaid as well as discretionary spending on core functions such as education and public safety. States facing fast-growing mandatory commitments or unique fiscal pressures, such as rapid population growth, may want to set higher savings targets.

Virginia and Minnesota offer two examples of states with robust reserve policies that exhibit very different levels of risk tolerance. Virginia's constitution allows state leaders to use the state's fund to cover no more than 50 percent of a shortfall in a fiscal year; as a result, the state must find programmatic cuts or tax changes to balance its budget during periods of revenue decline. The fund "provided time for the General Assembly to make meaningful adjustments, to structurally put the budget back into balance," said Ric Brown, the finance secretary. "It does provide a transition period where you don't quite have to cut as fast in attempting to make those changes, and that, from a practical standpoint and a political standpoint, is very advantageous."[37] However, Virginia has no evidence-driven process for determining how much to save.[38]

Minnesota, by contrast, has a rigorous two-part process, developed collaboratively by executive and legislative staffs, for setting its savings target. State economists perform an annual analysis of historic volatility in the parts of the state's economy that are subject to taxation, and then update their savings target to provide full coverage—a much higher level than in Virginia—for an array of possible revenue downturns.

The Minnesota methodology first uses statistical models to quantify the volatility of each of the state's revenue streams. The resulting estimates are combined to form a model of overall volatility across all state revenue. Most importantly, this volatility is examined over time, meaning that the current estimate is informed by both previous volatility and recent conditions.

Next the state specifies the level of coverage it desires to provide with its reserves in the event of a revenue downturn. Similar to an insurance policy, where the price reflects statistical assumptions about the likelihood of an unwanted event, this approach allows policymakers to determine their desired failure rate—namely, the tolerance policymakers have for not fully covering a potential shortfall—which affects how much the state should save.[39] Currently, lawmakers have opted to save enough money to entirely cover the estimated revenue shortfalls that would result in 9 out of 10 possible downturn scenarios.[40]

Since this policy was enacted in 2014, Minnesota Management & Budget has raised its recommended combined savings target for the state's Budget Reserve and Cash Flow accounts to $2.03 billion,[41] doubling the $1 billion the state was required to hold in the accounts prior to the reform.[42] Other states can learn from these methods. Lawmakers in Wyoming, for example, are currently adapting Minnesota's approach in order to insulate against their state's exceptionally volatile revenue.

Ultimately, there is no right or wrong level for what a state's budgetary risk tolerance should be. States may opt to guard against more or less risk depending on their own spending priorities, obligations, and political cultures. What is most important for setting an appropriate optimal size is ensuring that a reserve fund provides a state's government with its desired level of insurance against recession-driven budgetary risk.

Recommendations

For states seeking to improve their savings targets for rainy day funds, Pew recommends three best practices to better align targets with goals.

Explicitly define, in law, the purpose of a rainy day fund

Doing so allows policymakers to identify under what conditions a fund will be used and facilitates accurate estimates for the magnitude of the shortfalls the fund is expected to offset. This is easiest when fund purposes are both clearly defined and narrowly drawn. Limiting the purpose to a few key objectives, having a single purpose, or clearly communicating a primary purpose allows states to more closely align savings targets with measurable shortfall scenarios.

Utah, for example, explicitly lists four conditions that the state's Budget Reserve Account is intended to address. State statute provides for withdrawals in order to "(a) resolve a General Fund budget deficit, for the fiscal year in which the General Fund budget deficit occurs, (b) pay certain state settlements, (c) pay retroactive tax refunds, or (d) resolve an Education Fund budget deficit."[43]

Align savings targets with the fund's purpose as well as with the state's tax volatility

Once questions about both the purpose of the fund and the volatility of state revenue are addressed, states can use the evidence to conclude how much, ideally, they should be saving.

Minnesota follows the most rigorous process Pew found for determining the ideal level of rainy day fund savings. State policymakers analyze patterns in the state's revenue volatility and use the fund's statutory purpose as evidence to annually revise the size of the state's savings target in an ever-changing economic and fiscal landscape.

Since the Great Recession, New York—like 15 other states—has increased the savings target for its rainy day fund.

Determine and clearly express the level of budgetary risk the state seeks to offset

A maximum savings target or cap should be based on the level of budgetary risk a state intends to offset, which can be adjusted to reconcile policymakers' preferences with other budget priorities and political sensitivities.

States that struggle to decide how much to save should consider the promising practices of Virginia (which aims to offset just half of an unexpected current-year shortfall) and Minnesota (which aims for total coverage of 90 percent of expected shortfalls over a biennium), even if their budgetary circumstances are significantly different.

Conclusion

In recent years, many states have moved toward evidence-based processes for determining their rainy day funds' optimal sizes. Several states, such as Illinois, Montana, and Wyoming, have conducted one-time volatility studies in order to better understand their economic and revenue fluctuations. When done on a recurring basis, as recommended by The Pew Charitable Trusts in a 2014 report *Building State Rainy Day Funds*, these studies can help inform savings policy. Connecticut's reforms and Nebraska's new requirement to conduct periodic volatility studies will put these states in a leading position on rainy day fund policy, alongside Minnesota and Utah.

Without a stated reason for saving, states frequently struggle to determine how much they should save in their rainy day funds. Many states have historically saved too little, leaving them exposed to avoidable cuts and tax increases during downturns, while others have saved more than they actually need, forgoing other budgetary options. When setting rainy day fund policies, states should explicitly define the purpose of their fund in statute, study their tax volatility, and identify what level of budgetary risk they intend to offset. The result of these policy actions will be a fund that is the correct size to guard against the unexpected while enhancing states' fiscal health over the long term.

Appendix A: Methodology

For this report, Pew conducted two rounds of classification related to the scope of each fund's purpose. This effort identified whether states' funds had clearly and narrowly defined objectives that could provide guidance for how empirical evidence might be employed to inform a savings target.

Rainy day fund identification

In an earlier report, *Building State Rainy Day Funds*, Pew researchers identified and examined the statutory and constitutional guidelines in all 50 states pertaining to the mechanisms for depositing money into budget stabilization funds. States use a number of funds to set aside money for various purposes. To focus on the challenge of managing volatility, Pew narrowed the scope of this report to include only budget stabilization funds, using the definition set forth by Yilin Hou in *State Budget Stabilization*.[44] Hou's definition identifies three key characteristics of these funds. First, there must be enabling legislation that establishes them. Second, they operate across fiscal years and over the whole economic cycle (i.e., rather than cash flow funds for use during the fiscal year or legacy funds like North Dakota's). Third, they must serve as government-wide reserves for general purposes (i.e., not for Medicaid or education specifically).

To assemble the list of qualifying funds, Pew built upon previous research examining these types of reserves, collecting data from three peer-reviewed academic sources as well as the National Conference of State Legislatures and the Center on Budget and Policy Priorities.[45] The researchers cross-referenced these five sources to develop a list of 52 budget stabilization funds across 46 states, then further verified them by identifying their enabling legislation. For each valid fund, Pew examined the enabling statute to detail the designated purpose and scope of the fund.

Purpose and definition classification

The first iteration of coding focused on whether the enabling text provided a distinct statement of purpose for the rainy day fund in state law. If a state provided statutory or constitutional language specifically designating the goal(s) for the fund, Pew categorized the fund as having an "explicit" purpose. Conversely, a fund was classified as having an "implied" purpose if the state constitution or statute did not provide any statement regarding the fund's goals, leaving the purpose to be determined by the conditions for withdrawal. Two researchers separately examined and classified each fund to ensure accuracy. In the event that the coding was in disagreement, a team of four researchers discussed the statutory/constitutional language until it reached an agreement on the appropriate category.

The second classification examined each fund's purpose statement from the perspective of a state fiscal analyst charged with identifying an evidence-based savings target. This step was intended to determine which funds were adequately defined to assist in the state's efforts to gauge how much to save. Researchers were asked to discern whether the stated objectives of the fund were clear and measurable so that they could be used to estimate a savings target. In the event that the fund's objectives were drawn precisely enough to provide a potential reference point for a savings target, Pew classified the fund as having a "narrow" definition. However, if the objectives defined were vague, nonspecific, or too expansive to inform a savings target, Pew classified the fund as having a "broad" definition. Similar to the explicit/implied classification, each fund was examined and classified separately by two researchers to improve accuracy. If the coding was in disagreement, a team of four researchers discussed the statutory/constitutional language until it reached an agreement on the appropriate category.

The following table provides a statutory citation for each rainy day fund, along with Pew's classifications regarding whether the fund's purpose is explicitly stated or implied, and whether the purpose is defined narrowly enough for an evidence-based savings target determination or too broadly to be informed by empirical evidence.

Table A.1

Most States Do Not Explicitly and Narrowly Define a Purpose in State Law for Their Funds

State	Fund	Statute	Purpose	Definition
Alabama	General Fund Rainy Day Account	Ala. Const. Art. XIV, § 260.02 (2015)	Implied	Broad
Alaska	Constitutional Budget Reserve Fund	Alaska Const. Art. IX, § 17(c) (2015)	Implied	Broad
Alaska	Statutory Budget Reserve Fund	Alaska Stat. § 37.05.540(c) (2015)	Implied	Broad
Arizona	Budget Stabilization Fund	Ariz. Rev. Stat. § 35-144(C) (2015)	Implied	Narrow
Arkansas	Rainy Day Fund	Ark. Code Ann. § 19-6-486(d) (2015)	Implied	Narrow
California	Budget Stabilization Account	Calif. Const. Art. XVI § 22 (2015)	Implied	Narrow
California	Special Fund for Economic Uncertainties	Calif. Gov. Code § 16418(b) (2015)	Implied	Narrow
Colorado	No fund	No fund	N/A	N/A
Connecticut	Budget Reserve Fund	Conn. Gen. Stat. § 4-30a(b) (2015), as amended by Conn. Pub. L. No. 15-244 (2015)*	Explicit	Narrow
Delaware	Budget Reserve Account	Del. Const. Art. VIII, § 6(d) (2015)	Implied	Narrow
Florida	Budget Stabilization Fund	Fla. Stat. § 216.222 (2015)	Implied	Narrow
Georgia	Revenue Shortfall Reserve	Ga. Code Ann. § 45-12-93 (2015)	Implied	Narrow
Hawaii	Emergency and Budget Reserve Fund	Hawaii Rev. Stat. § 328L-3(d) (2015)	Explicit	Narrow
Idaho	Budget Stabilization Fund	Idaho Code § 57-814(1) (2015)	Explicit	Narrow
Illinois	No fund	No fund	N/A	N/A
Indiana	Countercyclical Revenue and Economic Stabilization Fund	Ind. Code Ann. § 4-10-18-2(a) (2015)	Explicit	Narrow
Iowa	Economic Emergency Fund	Iowa Code § 8.55(3) (2015)	Implied	Narrow
Kansas	No fund	No fund	N/A	N/A

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State	Fund	Statute	Purpose	Definition
Kentucky	Budget Reserve Trust Fund Account	N/A	No purpose	No definition
Louisiana	Budget Stabilization Fund	La. R.S. 39:94(C) (2015)	Implied	Narrow
Maine	Budget Stabilization Fund	Maine Rev. Stat. § 1532 (2015)	Explicit	Narrow
Maryland	Revenue Stabilization Account	Md. State Fin. & Procurement Code § 7-311(b) (2015)	Explicit	Narrow
Massachusetts	Commonwealth Stabilization Fund	Ann. Law of Mass. Gen. Law ch. 29, § 2H (2015)	Explicit	Narrow
Michigan	Countercyclical Budget and Economic Stabilization Fund	Mich. Comp. L. Stat. § 18.1351 (2015)	Explicit	Narrow
Minnesota	Budget Reserve Account	Minn. Stat. § 16A.152, Subd. 3. (2015)	Explicit	Narrow
Mississippi	Working Cash-Stabilization Reserve Fund	Miss. Code Ann. § 27-103-203 (2015)	Implied	Narrow
Missouri	Budget Reserve Fund	Mo. Const. Art. IV, § 27(a) (5) (2015)	Implied	Broad
Montana	No fund	No fund	N/A	N/A
Nebraska	Cash Reserve Fund	Neb. Rev. Stat. § 84-612 (2015)	Implied	Narrow
Nevada	Account to Stabilize Operation of State Government	Nev. Rev. Stat. Ann. § 353.288 (2015)	Implied	Narrow
New Hampshire	Revenue Stabilization Reserve Account	N.H. Rev. Stat. Ann. § 9:13-e (III) (2015)	Implied	Narrow
New Jersey	Surplus Revenue Fund	N.J. Stat. § 52:9H-18 (2015)	Implied	Broad
New Mexico	General Fund Operating Reserve	N.M. Stat. Ann. § 6-4-2.1(B) (2015)	Explicit	Narrow
New Mexico	General Fund Tax Stabilization Reserve	N.M. Stat. Ann. § 6-4-2.2 (2015)	Implied	Broad
New York	Tax Stabilization Reserve Fund	N.Y. State Fin. Law § 92(1) (2015)	Explicit	Narrow
New York	Rainy Day Reserve Fund	N.Y. State Fin. Law § 92-cc(3) (2015)	Explicit	Narrow
North Carolina	Savings Reserve Account	N.C. Gen. Stat. § 143C-4-2(c) (2015)	Explicit	Broad
North Dakota	Budget Stabilization Fund	N.D. Cent. Code, § 54-27.2-03 (2015)	Implied	Narrow

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State	Fund	Statute	Purpose	Definition
Ohio	Budget Stabilization Fund	Ohio Rev. Code Ann. 131.43 (2015)	Explicit	Broad
Oklahoma	Constitutional Reserve Fund	Okla. Const. Art. X, § 23(6-8) (2015)	Implied	Broad
Oregon	Rainy Day Fund	Ore. Rev. Stat. § 293.144 (2015)	Implied	Narrow
Pennsylvania	Budget Stabilization Reserve Fund	Pa. Stat. tit. 72 § 1703-A(a) (2015)	Explicit	Narrow
Rhode Island	Budget Reserve and Cash Stabilization Account	R.I. Gen. L. § 35-3-20(a) (2015)	Explicit	Narrow
South Carolina	General Reserve Fund	S.C. Const. Ann. Art. III, § 36(A) (2015)	Explicit	Narrow
South Carolina	Capital Reserve Fund	S.C. Code Ann. § 11-11-320(C) (2015)	Implied	Narrow
South Dakota	Budget Reserve Fund	S.D. Codified Laws § 4-7-32 (2015)	Implied	Narrow
Tennessee	Reserve for Revenue Fluctuations	Tenn. Code Ann. § 9-4-211(a)(1) (2015)	Explicit	Narrow
Texas	Economic Stabilization Fund	Texas Const. Art. III, § 49-g(j) (2015)	Implied	Broad
Utah	Budget Reserve Account	Utah Code Ann. § 63J-1-312(4) (2015)	Explicit	Narrow
Vermont	General Fund Budget Stabilization Reserve	Vt. Stat. Ann. tit. 32, § 308(a) (2015)	Explicit	Narrow
Vermont	Rainy Day Reserve	Vt. Stat. Ann. tit. 32, § 308c(b) (2015)	Implied	Narrow
Virginia	Revenue Stabilization Fund	Va. Code Ann. § 2.2-1828 (2015)	Explicit	Narrow
Washington	Budget Stabilization Account	Wash. Const. Art. VII, § 12(d) (2015)	Implied	Broad
West Virginia	Revenue Shortfall Reserve Fund	W.Va. Code § 11B-2-20(d) (2015)	Explicit	Broad
Wisconsin	Budget Stabilization Fund	Wis. Stat. § 25.60 (2015)	Explicit	Narrow
Wyoming	Legislative Stabilization Reserve Account	Enrolled Act No. 90, 2005 Wyo. Session Laws § 301-d	No purpose	No definition

* Effective July 1, 2019

Appendix B: State rainy day fund caps and targets

The following table displays each state's rainy day fund target or maximum balance as defined by state law as of October 2015, unless otherwise noted. In cases where a fund has both a savings target and a higher maximum balance defined in statute, the maximum balance is listed.

Table B.1

Statutory Caps and Targets for State Rainy Day Funds as a Percentage of FY 2015 General Fund Revenue

State	Fund name	Cap or target	Statute
Alabama	General Fund Rainy Day Account	10% of previous fiscal year's General Fund appropriations minus prior years' rainy day account withdrawals that have not been repaid	Ala. Const. Art. XIV, § 260.02(a) (2015)
Alaska	Constitutional Budget Reserve Fund	No cap	Alaska Const. Art. IX, § 17 (2015)
Alaska	Statutory Budget Reserve Fund	No cap	Alaska Stat. § 37.05.540 (2015)
Arizona	Budget Stabilization Fund	7% of current fiscal year's General Fund revenue	Ariz. Rev. Stat. § 35-144(H) (2015)
Arkansas	Rainy Day Fund	$125 million	Ark. Code Ann. § 19-6-486(f) (2015)
California	Budget Stabilization Account	10% of current fiscal year's estimated General Fund revenue	Calif. Const., Art. XVI § 20(e) (2015)
California	Special Fund for Economic Uncertainties	No statutory cap or target	Calif. Gov. Code § 16418 (2015)
Colorado	No fund	N/A	N/A
Connecticut	Budget Reserve Fund	15% of current fiscal year's General Fund appropriations	Conn. Gen. Stat. § 4-30a(a)(6) (2015) as amended by Conn. Pub. L. No. 15-244 (2015)*
Delaware	Budget Reserve Account	5% of current fiscal year's estimated General Fund revenue	Del. Const. Art. VIII, § 6 (d) (2015)
Florida	Budget Stabilization Fund	10% of prior fiscal year's General Fund revenue	Fla. Stat. § 215.32(2)(c)(1) (2015)
Georgia	Revenue Shortfall Reserve	15% of prior fiscal year's net revenue	Ga. Code Ann. § 45-12-93(h) (2015)
Hawaii	Emergency and Budget Reserve Fund	10% of prior fiscal year's General Funds revenue	Hawaii Rev. Stat. § 328L-3(a)(3) (2015)
Idaho	Budget Stabilization Fund	10% of prior fiscal year's General Fund revenue	Idaho Code § 57-814 (2)(b) (2015)†
Illinois	No fund	N/A	N/A

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State	Fund name	Cap or target	Statute
Indiana	Countercyclical Revenue and Economic Stabilization Fund	7% of current fiscal year's General Fund revenue	Ind. Code Ann. § 4-10-18-8 (2015)
Iowa	Economic Emergency Fund	2.5% of current fiscal year's estimated General Fund revenue	Iowa Code § 8.55(2) (2015)
Kansas	No fund	N/A	N/A
Kentucky	Budget Reserve Trust Fund Account	5% of current fiscal year's General Fund revenue	Ky. Rev. Stat. § 48.705(3) (2015)
Louisiana	Budget Stabilization Fund	4% of prior fiscal year's total state revenue	La. Rev. Stat. 39:94(C)(4)(a) (2015)
Maine	Budget Stabilization Fund	18% of prior fiscal year's General Fund revenue	5 Maine Rev. Stat. § 1532(1) (2015) as amended by Maine Pub. L. (2015), Ch. 267‡
Maryland	Revenue Stabilization Account	7.5% of current fiscal year's estimated General Fund revenue	Md. State Fin. & Procurement Code § 7-311(e)(2) (2015)
Massachusetts	Commonwealth Stabilization Fund	15% of prior fiscal year's budgeted revenue	Ann. Law of Mass. Gen. Law ch. 29, § 2H (2015)
Michigan	Countercyclical Budget and Economic Stabilization Fund	10% of prior fiscal year's combined School Aid Fund and General Fund-General Purpose revenue	Mich. Comp. L. Stat. § 18.1356 (2015)
Minnesota	Budget Reserve Account	$810,992,000§	Minn. Stat. § 16A.152 Subd. 2(a)(2) (2015)
Mississippi	Working Cash-Stabilization Reserve Fund	7.5% of current fiscal year's General Fund appropriations	Miss. Code Ann. § 27-103-213(3)(d) (2015)
Missouri	Budget Reserve Fund	10% of current fiscal year's net general revenue	Mo. Const. Art. IV, § 27(a)(7) (2015)
Montana	No fund	N/A	N/A
Nebraska	Cash Reserve Fund	No statutory target or cap	Neb. Rev. Stat. § 84-612 (2015)
Nevada	Account to Stabilize Operation of State Government	20% of current fiscal year's General Fund appropriations	Nev. Rev. Stat. Ann. § 353.288(3) (2015)
New Hampshire	Revenue Stabilization Reserve Account	10% of prior fiscal year's General Fund revenue	N.H. Rev. Stat. Ann. § 9:13-e (V) (2015)
New Jersey	Surplus Revenue Fund	5% of current fiscal year's estimated General Fund and Property Tax Relief Fund revenue	N.J. Stat. § 52:9H-21 (2015)
New Mexico	General Fund Operating Reserve	8% of prior fiscal year's aggregate recurring General Fund appropriations	N.M. Stat. Ann. § 6-4-4 (2015)
New Mexico	General Fund Tax Stabilization Reserve	6% of the prior fiscal year's aggregate recurring General Fund appropriations	N.M. Stat. Ann. § 6-4-4 (2015)
New York	Tax Stabilization Reserve Fund	2% of current fiscal year's General Fund expenditures	N.Y. State Fin. Law § 92(3) (2015)

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State	Fund name	Cap or target	Statute
New York	Rainy Day Reserve Fund	5% of next fiscal year's projected General Fund expenditures	N.Y. State Fin. Law § 92-cc(1) (2015)
North Carolina	Savings Reserve Account	8% of the prior fiscal year's General Fund operating budget	N.C. Gen. Stat. § 143C-4-2(c) (2015)
North Dakota	Budget Stabilization Fund	9.5% of current fiscal biennium's General Fund appropriations	N.D. Cent. Code, § 54-27.2-01 (2015)
Ohio	Budget Stabilization Fund	8.5% of prior fiscal year's General Fund revenue	Ohio Rev. Code Ann. § 131.44(B)(1)(a) (2015)
Oklahoma	Constitutional Reserve Fund	15% of prior fiscal year's certified General Revenue	Okla. Const. Art. X, § 23(5) (2015)
Oregon	Rainy Day Fund	7.5% of prior fiscal biennium's General Fund revenue	Ore. Rev. Stat. § 293.148 (1) (2015)
Pennsylvania	Budget Stabilization Reserve Fund	6% of current fiscal year's General Fund revenue	Pa. Stat. tit. 72 § 1702-A(b)(2) (2015)
Rhode Island	Budget Reserve and Cash Stabilization Account	5% of current fiscal year's estimated state general revenue	R.I. Gen. Laws § 35-3-20.1(b) (2015)
South Carolina	General Reserve Fund	5% of prior fiscal year's General Fund revenue	S.C. Const. Ann. Art. III, § 36(A) (2015)
South Carolina	Capital Reserve Fund	2% of prior fiscal year's General Fund revenue	S.C. Code Ann. § 11-11-320(A) (2014)
South Dakota	Budget Reserve Fund	10% of prior fiscal year's General Fund appropriations	S.D. Codified Laws § 4-7-32 (2015)
Tennessee	Reserve for Revenue Fluctuations	8% of current fiscal year's estimated sales tax revenue for the General Fund and Education Trust Fund	Tenn. Code Ann. § 9-4-211(a)(2) (2015)
Texas	Economic Stabilization Fund	10% of prior fiscal biennium's general revenue	Texas Const. Art. III, § 49-g(g) (2014)
Utah	Budget Reserve Account	9% of current fiscal year's General Fund appropriations	Utah Code Ann. § 63J-1-312 (3)(a)(ii) (2015)
Vermont	General Fund Budget Stabilization Reserve	5% of prior fiscal year's General Fund appropriations	Vt. Stat. Ann. tit. 32, § 308(b) (2015)
Vermont	Rainy Day Reserve	5% of prior fiscal year's General Fund appropriations	Vt. Stat. Ann. tit. 32, § 308(c)(a) (2015)
Virginia	Revenue Stabilization Fund	15% of prior three fiscal years' average annual income and retail sales tax revenue	Va. Const. Art. X, § 8 (2015)
Washington	Budget Stabilization Account	10% of current fiscal year's estimated general state revenue	Wash. Const. Art. VII, § 12(e) (2015)
West Virginia	Revenue Shortfall Reserve Fund	13% of prior fiscal year's State Fund-General Revenue appropriations	W.Va. Code § 11B-2-20(b) (2015)
Wisconsin	Budget Stabilization Fund	5% of current fiscal year's estimated General Fund expenditures	Wis. Stat. § 16.518(3)(1) (2015)
Wyoming	Legislative Stabilization Reserve Account	No cap	Wyo. Sess. Laws 191 section 301 (2005)

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* Connecticut's 15% cap is effective July 1, 2019.

† Idaho's 10% cap is effective May 31, 2017.

‡ The statutory text available through Maine's Legislature does not yet reflect the changes from the 2015 legislative session.

§ This figure reflects current Minnesota statute and represents a level up to which surplus state revenue should be automatically deposited in the Budget Reserve Account. However, the effective savings target for the account includes additional deposits and sits at a higher level determined by Minnesota Management & Budget (MMB) and updated periodically throughout the fiscal year. As of October 2015, the funded level for the Budget Reserve Account was $994 million. In its September 2015 "Budget Reserve Report," MMB recommended a combined $2.03 billion savings target for the Budget Reserve Account and the separate Cash Flow Account in the fiscal 2016-17 biennium.

Endnotes

1 National Association of State Budget Officers, *The Fiscal Survey of States: Spring 2015* (2015), http://www.nasbo.org/sites/default/files/NASBO%20Spring%202015%20Fiscal%20Survey%20of%20States%20-%20S.pdf. The report provides an estimate of $48.4 billion for Texas General Fund expenditures in FY2015.

2 Robert T. Garrett, "Texas' Rainy Day Fund Overflows—and Divides Legislators," *The Dallas Morning News*, March 20, 2015, http://www.dallasnews.com/news/politics/state-politics/20150320-texas-rainy-day-fund-overflows--and-divides-legislators.ece.

3 This exact situation was described by the Governor's Office of Planning and Budget in Utah. In its 2011 report, it states that the maximum balance it recommended for the state's General Fund Budget Reserve Account would have been higher if the fund's intent was to smooth multiple years of budget shortfalls rather than addressing singular, midyear shortfalls. The report states: "If the intent of Utah's Budget Reserve Accounts is to cover losses from errors in the revenue forecast for the current budget, then the existing policy of capping reserves at 6% of General Fund Appropriations and 7% of Education Fund Appropriations is more than adequate. If the intent of these rainy day funds is to reduce the severity of budget cuts over multiple years, then optimal reserve size depends on the extent to which policymakers want to insulate spending priorities from economic downturns." See Utah, Governor's Office of Planning and Budget, "Joint Revenue Volatility Report" (December 2011), http://governor.utah.gov/DEA/Publications/07OtherPublications/2011RevenueVolatility.pdf.

4 Stephen C. Fehr and Jonathan Moody, "Wyoming Lawmakers Consider How to Use Rainy Day Fund," *Stateline*, April 3, 2015, http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/4/03/wyoming-lawmakers-consider-how-to-use-rainy-day-fund.

5 Wyoming Legislative Service Office, "Revenue Volatility and Savings Analysis," memorandum from Don Richards to members of the Wyoming Joint Appropriations Committee, https://s3.amazonaws.com/s3.documentcloud.org/documents/1373348/201x-xlsox-xvolatilityxandxsavingsxx110414.pdf.

6 Fehr and Moody, "Wyoming Lawmakers."

7 Indiana Code § 4-10-18-2 (2015), http://codes.lp.findlaw.com/incode/4/10/18/4-10-18-2.

8 The totals for explicit and implied purposes sum to 44 of the 46 states with rainy day funds—22 explicit and 22 implied. The remaining two states, Kentucky and Wyoming, do not provide any purpose definition for their funds in statute.

9 New Jersey Stat. § 52:9H-18 (2015), http://law.justia.com/codes/new-jersey/2014/title-52/section-52-9h-18.

10 Michigan Comp. L. Stat. § 18.1351 (2015), http://legislature.mi.gov/doc.aspx?mcl-18-1351.

11 Similar to the explicit-implied classification, the sum of states with narrow and broad definitions totals 44 of the 46 states with rainy day funds—34 narrow and 10 broad. Kentucky and Wyoming are again classified as not having any fund definition.

12 New Mexico Stat. Ann. § 6-4-2.2 (C) (2014), http://law.justia.com/codes/new-mexico/2014/chapter-6/article-4/section-6-4-2.2.

13 Maryland State Finance and Procurement Code Ann. § 7-311 (2015), http://mgaleg.maryland.gov/webmga/frmStatutesText.aspx?article=gsf&section=7-311&ext=html&session=2016RS&tab=subject5.

14 Ric Brown (Virginia secretary of finance), interview with The Pew Charitable Trusts, February 2014.

15 Minnesota Stat. § 16A.152 (3) (2015), https://www.revisor.leg.state.mn.us/statutes/?id=16A.152.

16 Delaware Const. Art. VIII, § 6 (d) (2015), http://delcode.delaware.gov/constitution/constitution-09.shtml.

17 West Virginia Code § 11B-2-20 (d) (2015), http://www.legis.state.wv.us/wvcode/ChapterEntire.cfm?chap=11b&art=2&section=20.

18 Hawaii Rev. Stat. § 328L-3 (d) (2015), http://codes.lp.findlaw.com/histatutes/1/19/328L/328L-3.

19 Numerous states have legal definitions for budget or fiscal emergencies, which can be invoked by the executive, the legislature, or both, and which allow certain fiscal actions to be taken. These emergency declarations may refer to the aftermath of a natural or manmade disaster, conditions of fiscal crisis, or both, as in California's case.

20 California Const. Art. XIII B § 3 (c) (2) (2015), http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=CONS&sectionNum=SEC.%203.&article=XIII%20B.

21 California Const. Art. XVI § 22 (b) (2) (A) (2015), http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=CONS&sectionNum=SEC.%2022.&article=XVI.

22 Connecticut Gen. Stat. § 4-30a (b) (2013), http://law.justia.com/codes/connecticut/2013/title-4/chapter-47/section-4-30a.

23 Connecticut Public Act No. 15-244 § 164 (b) (2015), https://www.cga.ct.gov/2015/act/pa/pdf/2015PA-00244-R00HB-07061-PA.pdf.

24 New York State Fin. Law § 92 (1) (2014), http://law.justia.com/codes/new-york/2014/stf/article-6/92.

25 New York State Fin. Law § 92-cc (3) (2015), http://law.justia.com/codes/new-york/2014/stf/article-6/92-cc.

26 Citizens Budget Commission of New York, "The Broken Umbrella: How to Make New York State's Rainy Day Fund More Useful" (June 2011), http://www.cbcny.org/sites/default/files/REPORT_BrokenUmbrella_06062011.pdf.

27 Hans Olofsson (chief economist, Arizona Joint Legislative Budget Committee), interview with The Pew Charitable Trusts, December 2013.

28 From The Pew Charitable Trusts' analysis of the following discussions: Gabriel Petek (managing director, U.S. Public Finance, Standard & Poor's Financial Services), interview with The Pew Charitable Trusts, March 5, 2015; Laura Porter (managing director, Public Finance, Fitch Ratings), interview with The Pew Charitable Trusts, Feb. 9, 2015; Kate Hackett (managing director, Kroll Bond Rating Agency), interview with The Pew Charitable Trusts, May 29, 2015; Emily Raimes (vice president, senior credit officer, Public Finance Group, Moody's Analytics), interview with The Pew Charitable Trusts, April 22, 2015.

29 The Pew Charitable Trusts, *Managing Uncertainty: How State Budgeting Can Smooth Revenue Volatility* (February 2014), http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2014/volatilitymanaginguncertaintypdf.pdf; The Pew Charitable Trusts and Nelson A. Rockefeller Institute of Government, "Managing Volatile Tax Collections in State Revenue Forecasts" (March 2015), http://www.pewtrusts.org/~/media/Assets/2015/03/StateRevenueForecastingReportARTFINALv4web.pdf; and The Pew Charitable Trusts and Nelson A. Rockefeller Institute of Government, *States' Revenue Estimating: Cracks in the Crystal Ball* (March 2011), http://www.rockinst.org/pdf/government_finance/2011-03-01-States_Revenue_Estimating_Report.pdf.

30 Pew compiled a data set of all 46 states' reserve fund usage, recording balances, withdrawals, and deposits from fiscal 1994 through fiscal 2014. Pew searched the data for instances in which state rainy day fund balances reached their caps during the growth years of the 2000s, between fiscal 2000 and 2008, and identified 21 states that reached their statutorily defined targets leading into the Great Recession.

31 The Pew Charitable Trusts, *Building State Rainy Day Funds* (July 2014), 17-19, http://www.pewtrusts.org/~/media/assets/2014/07/sfh_rainy-day-fund-deposit-rules-report_artready_v9.pdf.

32 Matthew Schoeppner (economist, Minnesota Management & Budget), email communication with The Pew Charitable Trusts, Oct. 26, 2015; see also Minnesota Management & Budget, "Budget Reserve Report" (September 2015), https://mn.gov/mmb/images/BR-Report-Sept2015.pdf.

33 Progress toward the savings target established by Minnesota's annual reserve fund study, which examines volatility in the state's taxable economic base, is calculated by considering the sum of two state funds, the Budget Reserve Account and the Cash Flow Account. Balances in both funds are considered accessible for use in maintaining the level of continuation spending set forth in Minnesota statute.

34 Pew's analysis compared state tax volatility levels to rainy day fund targets. Fund targets were standardized as a share of each state's fiscal 2014 general fund revenue. Tax volatility is measured using volatility scores—a number showing how many percentage points above or below the state's overall growth trend its revenue fluctuated from 1993 to 2013 after removing the estimated effects of tax policy changes. The relationship between volatility and fund targets was assessed through correlations and simple regression models. Pew's analysis showed no relationship between tax volatility and statutory cap size. In addition, Pew performed a similar analysis comparing tax volatility and state reserves. State reserves are measured as the average number of days' worth of operating expenses the state has available to fill budget gaps, inclusive of rainy day fund balances as well as general fund surpluses or other miscellaneous reserve funds from 1994 through 2013. States with volatility scores greater than 10—Alaska, Wyoming, and North Dakota—have unusually high reserve balances, which distort the relationship in a statistical analysis and were excluded from statistical models. For the 47 states with volatility scores less than 10, Pew found no statistical relationship between states' levels of tax volatility and how much they had in savings.

35 Jani Revier (administrator, Idaho Division of Financial Management), interview with The Pew Charitable Trusts, Feb. 9, 2015.

36 Texas Department of Transportation, "Prop 1 Funding FAQ," last modified Jan. 12, 2015, http://ftp.dot.state.tx.us/pub/txdot-info/sla/transportation-funding/proposition-faq.pdf.

37 Brown, interview.

38 The Virginia Constitution dictates that the cap on the rainy day fund is 15 percent of the average annual tax revenue from the preceding three fiscal years.

39 For example, if policymakers want their rainy day fund to cover 75 percent of all recessions (which is a 25 percent failure rate) rather than the 90 percent of all recessions (which is a 10 percent failure rate) currently specified in Minnesota, this empirical approach can be adapted to fit that preference. A higher failure rate (25 percent) will result in a lower recommended savings target than a lower failure rate (10 percent); however, a higher failure rate and a smaller reserve fund will not provide as much insurance against recession-driven revenue shortfalls as the more costly, lower failure rate policy would provide.

40 Although the current savings target is the amount deemed necessary to cover 90 percent of all possible downturn scenarios in Minnesota, the state does not currently have that amount set aside in its two main savings accounts. Minnesota's target is intended as a financial goal, not a requirement. In practice, the state makes progress toward the savings goal during times of growth. By not requiring a set rate of progress toward the savings target, the policy has the added benefit of not creating undue fiscal stress on the state's budget during times of poor economic performance or other unforeseeable emergencies.

41 Minnesota Management & Budget, "Budget Reserve Report."

42 Before the 2014 legislation, the Budget Reserve Account had a $653 million statutory cap, while the Cash Flow Account had (and continues to have) a $350 million statutory cap. See Minnesota H.F. 1777, Art. 6 (2014), http://wdoc.house.leg.state.mn.us/leg/LS88/HF1777.4.pdf.

43 Utah Code Ann. § 63J-1-312 (4) (2015), http://le.utah.gov/xcode/Title63J/Chapter1/63J-1-S312.html?v=C63J-1-S312_2015051220150512.

44 Yilin Hou, *State Government Budget Stabilization: Policy, Tools, and Impacts* (Studies in Public Choice Series), (New York: Springer Science+Business Media, 2013).

45 Yilin Hou, *State Government Budget Stabilization*; Shanna Rose and Daniel L. Smith, "Budget Slack, Institutions, and Transparency," *Public Administration Review* 72, no. 2 (2011): 187–95; Gary M. Wagner and Erick M. Elder, "The Role of Budget Stabilization Funds in Smoothing Government Expenditures Over the Business Cycle," *Public Finance Review* 33, no. 4 (July 2005); Daniel G. Thatcher, "State Budget Stabilization Funds," National Conference of State Legislatures (Sept. 26, 2008), http://www.ncsl.org/research/fiscal-policy/state-budget-stabilization-funds-spring-2008.aspx; and Elizabeth McNichol and Kwame Boadi, "Why and How States Should Strengthen Their Rainy Day Funds," Center on Budget and Policy Priorities (Feb. 3, 2011), http://www.cbpp.org/sites/default/files/atoms/files/2-3-11sfp.pdf.

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