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Preventing State Budget Crises: Managing the Fiscal Volatility Problem

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State governments have been on a fiscal rollercoaster in recent years. The mild recession of the early 1990s—which created budget crises in many states—was followed by strong growth during the later part of the decade. States used their then-overflowing coffers to pass numerous tax cuts while increasing funding for a variety of government programs. Yet the bursting of the tech bubble in 2001 brought about a new round of budgetary emergencies, this time of even larger magnitude.1 “By January 2003, combined state budget gaps were estimated at $75 to $80 billion, or 14.5 to 18 percent of total state spending.”2

Boom and bust cycles are a fact of modern economic life. States regained their budgetary confidence during the brief economic boom of the mid-2000s. Now, as if by déjà vu, states face yet another round of budget crises as a result of the most recent recession.3

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2. Id. at 1.

As a general rule, any given set of tax rates generates less revenue during recessions and more during periods of growth. Consequently, when governments face balanced-budget constraints (limits on their ability to incur deficits), economic cycles produce fiscal volatility. The governments must enact tax-rate hikes, spending cuts, or both during downturns, while turning to some combination of tax-rate cuts and spending increases during upturns.

This Article analyzes how states should cope with fiscal volatility on both the levels of "ordinary politics" and "institutional-design policy." On the level of ordinary politics, this Article asks: How should states adjust their tax and spending policies as their economies cycle? Alternatively, which is more harmful as a response to fiscal volatility, tax-rate adjustments or spending fluctuations? On the level of institutional-design policy, this Article asks: How should states structure their budgetary institutions and procedures so as to improve the way the ordinary political process manages fiscal volatility?

On both levels, this Article operates in the realm of the second-best. Ideally, states would employ first-best measures for reducing the magnitude of fiscal volatility. However, states are unlikely to implement first-best measures—such as weakening balanced-budget constraints or adopting rainy-day funds—to the degree necessary to solve state fiscal-volatility problems.

4. This Article uses the term "balanced-budget constraints" to refer to informal forces that lead states to balance their budgets in addition to the formal legal rules that require states to do so. For further discussion on the nature of state balanced-budget constraints, see infra Part I.B.

5. Fiscal volatility dilemmas have troubled U.S. cities and states, as well as many foreign nations. There is even reason to think the U.S. federal government might face fiscal volatility problems at some point in the future (see infra Part I.D.). Although this Article will briefly consider how fiscal volatility plays out at other levels of government, and although most of the Article's prescriptions apply to other government levels, the Article's primary concern is how U.S. state governments should respond to the fiscal volatility created by their balanced-budget constraints.


7. The distinction between ordinary politics and institutional-design policy captures two different modes in which academics might be called on to give policy advice. "Ordinary politics" refers to when policymakers ask academics how they should respond to a given problem at a specific point in time. During an economic downturn, the ordinary politics question usually involves policymakers asking academics for advice on how to raise additional revenues or cut spending while causing the least economic harm. In contrast, "institutional-design policy" refers to when policymakers ask academics how to reform budgetary institutions and procedures so as to improve the decisions made by future policymakers.

8. In the context of this Article, measures for reducing the harmful consequences of fiscal volatility are considered "second-best" as compared to "first-best" measures for eliminating fiscal volatility. If fiscal volatility could be completely eliminated, there would be no need for second-best coping measures such as those this Article proposes.

9. See infra Part I.C for a definition and discussion of rainy-day funds.
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problems. Indeed, the magnitude of the fiscal volatility created by economic cycles has been growing over time. While we should certainly strive to eliminate this volatility to the extent we can reasonably do so, the question of how to cope with the remaining volatility will continue to be a pressing problem.

To consider this problem first on the level of ordinary politics, economists typically agree that unstable tax policies—such as fluctuating tax rates—are economically harmful. This accepted wisdom dates back to Adam Smith, who wrote that "the certainty of what each individual ought to pay is, in taxation, a matter of so great importance that a very considerable degree of inequality... is not near so great an evil as a very small degree of uncertainty."  

10 Policy advocacy organizations and the popular press and have adopted this notion to some degree, and often chide politicians for changing tax laws too frequently, even when these changes are made to cope with economic cycles. 11 However, there is essentially no existing literature comparing instability in tax policies to instability in spending policies. 12 This Article remedies this deficiency in the literature by comparing the relative harm of managing fiscal volatility either through tax-rate adjustments or through spending fluctuations.

Drawing on principles from risk-allocation theory, this Article concludes that states should primarily deal with fiscal volatility by adjusting the rates of broad-based taxes (such as sales taxes, income taxes, and property taxes). 13 As compared to fluctuating state-government spending, adjusting tax rates can accomplish greater risk spreading and thereby better mitigate the harmful effects of fiscal volatility. Broad-based tax-rate adjustments accomplish greater risk spreading for three reasons. First, state tax and spending policies are redistributive on the margin, and wealthy taxpayers can absorb the harmful consequences of risk and uncertainty more efficiently than can the less wealthy beneficiaries of state spending programs. Second, because revenue volatility is


12. A notable exception is: Jesse Edgerton, Andrew Haughwout & Rae Rosen, Institutions, Tax Structure and State-local Fiscal Distress, 57 NAT’L TAX J. 147 (2004). However, Edgerton and his co-authors only discuss the macroeconomic stimulatory consequences of fluctuating spending as compared to fluctuating tax rates; they do not discuss the microeconomic risk-allocation consequences that are the focus of this Article.

13. The term "broad-based taxes" refers to tax instruments that reach the majority of state economic activity. In contrast, "narrow-based taxes" reach a much smaller portion of state economic activity. For instance, cigarette taxes are much narrower in base than retail sales taxes, as cigarette taxes cover only tobacco-related sales while retail sales taxes also cover non-tobacco-related sales. Income taxes, sales taxes, and property taxes are probably the broadest-based of the commonly used state tax instruments. However, the bases of these tax instruments are broader in some states than in others, depending on the level of built-in exemptions, credits, and other preferences.
more than twice as severe as economic volatility, tax-rate adjustments are needed to prevent the harmful effects of fiscal volatility from being unduly concentrated in state spending programs. Finally, legal and political constraints thwart public administrators from efficiently mitigating the harm that results from fiscal volatility, whereas private-sector managers are less constrained. Consequently, the least harmful method for coping with fiscal volatility is to adjust the rates of broad-based taxes.

However, the trend in recent years has been for states to adjust anything other than the rates of broad-based taxes. Moreover, it is doubtful whether any scholarly argument can change this result—at least within the realm of ordinary politics. This Article thus seeks to disentangle the question of how tax and spending policies should respond to fiscal volatility from the question of what tax and spending policies should be in their steady states.14 This Article aims to convince even those who seek to reduce the steady-state levels of taxes and spending that volatility around these steady states should be allocated to tax rates.

Yet ordinary politics never operate within a steady state; actual policy changes are always made during a specific point of an economic cycle. During a downturn, it is unrealistic to ask small-government advocates to campaign for tax-rate hikes rather than for spending cuts. Similarly, during an upturn, supporters of increased government spending are unlikely to accept tax-rate cuts in place of additional spending. Even members of these groups who agree that volatility should be allocated to tax rates are unlikely to distinguish between fluctuations made due to economic cycles and changes made due to real steady-state policies. If a small-government advocate accepts tax hikes during a downturn, how can she insure that those who want increased spending will return the favor by agreeing to lower the tax rates during the next upturn?

Given these limitations of ordinary politics, this Article also discusses the fiscal volatility problem on the level of institutional-design policy. The key to this level of analysis is how we define terms like “tax cuts” and “tax hikes.” These labels are among the most potent phrases in the American political lexicon. Even before the ascendancy of the modern conservative movement, politicians were extremely averse to being seen as raising taxes. Today, any Republican viewed as supporting tax hikes risks a primary challenge sponsored by groups like the Club for Growth.15 Similarly, many Democrats strive to deflect the charge of “tax and spend liberal.”16 Yet despite the political salience

14. In reference to tax and spending policies, the term “steady states” refers to the average settings of these policies taken across both boom and bust years.


16. See, e.g., Larry Rohter, Will the Real Tax-and-Spender Please ‘Fess Up?, N.Y. TIMES,
of these labels, we lack a precise theoretical definition for what constitutes a “tax cut” or a “tax hike.” Most crucially for our purposes, these labels only make sense in reference to a baseline. Without some concept of what the default tax and spending policies would be in the absence of legislated changes, we cannot determine whether any proposed legislative action truly constitutes a “tax cut” or a “tax hike.”

Unlike at the federal level, the states’ balanced-budget constraints make it impossible to hold both tax and spending policies constant as the economy cycles. States are thus unable to use the entirety of their previous year’s tax and spending policies as a baseline. As a result, state income and sales tax systems use only the prior year’s tax rates as their baseline (i.e. the tax rates currently on the books). In the absence of legislative action, tax rates remain steady throughout economic cycles while revenues fluctuate. When legislatures raise tax rates, observers code these changes as “tax hikes” even when overall revenues are declining due to slowing economic conditions.

Although this institutional-design-level policy choice has not been critiqued (or even noted), there are alternative baselines that states could choose in place of tax rates. For instance, the local property tax systems of several states hold revenue targets constant as their baseline. As the property values that form the bases for these taxes fluctuate, the default response is to adjust property tax rates to keep the amount of revenue generated constant. The localities are only considered to propose “tax hikes” or “tax cuts” when they call for changes to the revenue targets; the annual tax-rate adjustments are not labeled as tax hikes or tax cuts unless they result from a legislated raising or lowering of the revenue targets.

Moreover, tax rates and revenue targets are not the only aspects of fiscal policy that states might use as a baseline. Consider that the size of many federal grants to states depends on metrics for how much states need the funding. Grants of this sort that support poverty assistance programs will thus automatically grow larger during downturns and smaller during upturns as their funding metrics show the state populations needing more or less poverty assistance. We could potentially create a baseline for state-tax rates based on metrics for spending needs, administratively adjusting the rates to meet the cyclical funding requirements of programs that cost more during busts than during booms.

The choice of baselines at the institutional-design level impacts the outcomes of the ordinary political process. The literature on voter psychology tells us that preferences for tax and spending policies exhibit a status-quo bias: voters display an “endowment effect” in regard to fiscal policy and “loss-

aversion” with respect to fiscal policy changes.\textsuperscript{17} Furthermore, positive political theory predicts that it is generally harder to change a default policy than to prevent such a change (due to the prevalence of veto points within our systems of checks and balances). Consequently, whatever aspect of fiscal policy we set as a baseline should tend to fluctuate less as the economy cycles.

Hence, the current trend of allocating the majority of fiscal volatility to government spending results at least partially from the fact that states use tax rates as their primary baselines. By replacing these baselines with revenue targets (or with spending needs), we could make tax-rate adjustments more common and expenditure fluctuations rarer. State politicians would be less likely to cut spending during downturns if the alternative did not require voting for “tax hikes.” And if upturns no longer automatically brought massive revenue growth, politicians would become more reluctant to increase spending.

This Article proceeds in three parts. Part I analyzes the nature of the fiscal volatility problem in more detail and explains why first-best solutions are unlikely to solve the problem. Part II examines the problem through the lens of ordinary politics, evaluating the extent to which fiscal volatility should be dealt with by fluctuating tax rates or government spending. Part III considers the problem through the lens of institutional-design policy, discussing the choice of baselines for defining terms like “tax cuts” and “tax hikes.”

I

UNDERSTANDING THE FISCAL VOLATILITY PROBLEM

Before we can determine how states should cope with fiscal volatility, we must first understand the nature of the fiscal volatility problem. This Part discusses the impact of state-level fiscal volatility, why states cannot resolve their fiscal volatility dilemmas directly (either by abandoning their balanced-budget constraints or through other first-best solutions), and how fiscal volatility problems play out at other levels of government.

A. The Impact of State-Level Fiscal Volatility

To appreciate the impact of the fiscal volatility problem at the state level, it is worth starting with a few anecdotes. Consider the following excerpts from a New York Times article written near the end of the 2001–2003 downturn:

At a time when the governor of Missouri has ordered every third light bulb unscrewed to save money, when teachers are doubling as janitors in Oklahoma and working two weeks without pay in Oregon, when Connecticut is laying off prosecutors and Kentucky is releasing prison inmates early . . . [states] have tapped rainy day funds, raided tobacco money that was supposed to have provided health care for children and taxed every possible vice.

\textsuperscript{17} I describe the literature on these phenomena in Part III.A.2.
Last year brought the storm warnings: some layoffs, the inconveniences of libraries closing early and roads without fresh asphalt. Now, as states scramble to find ways to cut nearly $100 billion this year and next from budgets that must by law be balanced, the cuts are much larger, and their effects profound.

It is not just that states are withdrawing health care for the poor and mentally ill. They are also dismissing state troopers, closing parks and schools, dropping bus routes, eliminating college scholarships and slashing a host of other services that have long been taken for granted.\(^{18}\)

Forty-nine of the U.S. states have some form of balanced-budget requirements.\(^{19}\) And even the one state that does not—Vermont—has generally acted as though so bound.\(^{20}\) These constraints have created significant fiscal volatility as the state economies have cycled through booms and busts. In California, for instance, the standard deviation of state revenues (that is, the average variation around the overall trend) was 8\% between the years 1980 and 2004.\(^{21}\) Average volatility of this magnitude can result in dramatic short-term shifts in state fiscal positions. Looking again at California, the state’s general fund revenues grew by 20\% in 2000, only to fall by 17\% in 2002 as the tech bubble collapsed.\(^{22}\)

Most other states shared California’s experience, at least to some degree. According to the Federation of Tax Administrators, “total state revenues fell by 24 percent between the third quarter of 2001 and the second quarter of 2002, and personal income tax collections plunged by 42.7 percent.”\(^{23}\) As Elaine Maag and David Merriman explain:

State tax revenues for fiscal 2001, which ended June 2001 in most

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22. Id. at 35.
states, were almost $30 billion higher than they had been a year earlier. State tax revenues declined dramatically thereafter. During fiscal 2002, tax revenues were about $32 billion less than in fiscal 2001. Thus, state revenues were an unprecedented $62 billion less than they would have been if revenue growth had matched the previous year. It is not surprising that these events caught at least some state policymakers unprepared, and resulted in a major fiscal crisis.\footnote{Elaine Maag & David Merriman, Tax Policy Responses to Revenue Shortfalls, 29 ST. TAX NOTES 363, 363–64 (2003) (emphasis omitted).}

During upturns, states find themselves flushed with revenues. State officials use this extra money to expand existing programs, create new ones, and cut taxes.\footnote{NASB, supra note 23, at 7.} Yet this revenue disappears once the economy enters a downturn, forcing state officials either to reduce spending or to raise taxes. As the National Association of State Budget Officers puts it, "No one wants to take an action one year only to reverse it the next. Yet many state officials did exactly that during the early 1980s, and again during the early 1990s, repeating a pattern that is decades old."\footnote{Id.}

Unfortunately, it is extremely difficult to predict when downturns will occur.\footnote{Vasch6 & Williams, supra note 21, at 40; NASB, supra note 23, at 7–8.} If policymakers had known in 2000 or in 2007 that downturns were just around the corner, they might have been more careful with their temporarily increased funds. But both the tech bust in 2001 and the financial crisis in 2008 came as surprises. Certainly, there were analysts who predicted that the internet and real-estate booms were unsustainable. Yet most of these analysts had been making the same predictions throughout the late 1990s and mid-2000s while revenues continued to surge.\footnote{See infra notes 91–94 and accompanying text.} Only with the benefit of hindsight can we accurately know when a boom will turn into a bust.

The fiscal volatility problem has troubled states at least since they adopted balanced-budget constraints in response to the debt crises of the nineteenth century.\footnote{See infra note 63–66 and accompanying text.} Nevertheless, the problem has become much worse over the last few decades. Due largely to the rise of the conservative antitax movement, states appear to have altered the ways in which they cope with fiscal volatility. Meanwhile, the overall magnitude of fiscal volatility has been increasing over time.

1. How States Cope with Fiscal Volatility

The manner in which states respond to fiscal volatility has shifted dramatically in recent years. Between World War II and the mid-1970s, state governments expanded rapidly, with overall state tax burdens rising from 3% of Gross Domestic Product (GDP) in 1950 to 5.5% of GDP in 1975.\footnote{J. Fred Giertz & Seth H. Giertz, The 2002 Downturn in State Revenues: A Comparative...
Consequently, during the four recessions between 1952 and 1973, the overall trend of increasing revenues largely overshadowed the cyclical fluctuations of state finances; although the recessions of this period resulted in slowed growth, state tax revenues never declined on a year-to-year basis. As it is much easier to delay spending increases than to actually cut programs, fiscal volatility during this period was a relatively minor problem.

This rosy picture began to change in the mid-1970s. The growth of state governments halted after 1975, with state tax revenues oscillating around 5.5% of GDP from 1975 through 2008. With state expenditures no longer growing as a percentage of the states’ economies, the recessions in this period have created significant fiscal distress for state and local governments.

This stabilization of state tax levels coincided with the rise of the conservative antitax movement. The late 1970s brought the first major antiproperty tax measure in California’s Proposition 13. Soon after, Ronald Reagan successfully won the presidency campaigning for smaller government. Today, numerous Republicans and even some Democrats have signed the No New Taxes Pledge, committing them to “oppose any and all efforts to increase the marginal income tax rates for individuals and/or businesses.” The Pledge makes no exceptions for cyclical tax hikes meant to cope with fiscal volatility.

The growing power of the antitax movement has considerably altered how states manage fiscal downturns. During the recession of the early 1990s, state governments responded with a roughly equal mixture of tax hikes and spending cuts. As the economy rebounded in the second half of that decade, the states

31. Id.
32. Id. Note that state governments only stopped growing as a percentage of state GDPs; in both real and nominal dollar values, state governments continued growing along with the private-sector portions of states’ economies.
34. See Robert W. Smith & Thomas D. Lynch, Public Budgeting in America (5th ed. 2004); Fred Block, Read Their Lips: Taxation and the Right-Wing Agenda, in The New Fiscal Sociology 68 (Isaac William Martin, Ajay K. Mehrortra & Monica Prasad eds., 2009). The rise of the antitax movement was undoubtedly at least a partial cause of the stabilization of state tax revenues.
36. See id. The pledge, in its entirety, states: “I, _______, pledge to the taxpayers of the ________ district of the state of __________, and to the American people that I will: ONE, oppose any and all efforts to increase the marginal income tax rates for individuals and/or businesses; and TWO, oppose any net reduction or elimination of deductions and credits, unless matched dollar for dollar by further reducing tax rates.” Id.
returned to lowering taxes and increasing spending. Yet during the 2001–2003 downturn, state governments relied three times as much on spending cuts as on tax and fee increases—with fee increases being more prevalent than tax hikes.\footnote{Id. ("[S]tates were three times more likely to rely on spending cuts to close deficits than on revenue increases."); see also Irene Rubin, The State of State Budget Research, PUB. BUDGETING & FIN., Dec. 2005 Silver Anniversary Ed., at 46, 49 (2005) ("One conclusion from this research is that states that used to use both revenue increases and spending decreases to close gaps have in recent years ruled out tax increases, leading nearly exclusively to spending reductions.").}

Many of the governors and legislators who supported raising taxes as a means of coping with the 1990s recession were punished in subsequent elections.\footnote{Maag & Merriman, supra note 24, at 371-72.} Common wisdom now holds that politicians sponsor tax hikes at their own peril, even when the only alternative is to cut spending. A number of states have gone so far as to enact tax-expenditure limits, which prohibit state legislatures from raising taxes—or impose super-majority requirements for doing so—even as a response to cyclical downturns.\footnote{Id. at 372; Iris J. Lav, Elizabeth C. McNichol & Robert Zahradnik, Faulty Foundations: State Structural Budget Problems and How to Fix Them, 37 ST. TAX NOTES 43, 75-77 (2001).} Some state governments still find it politically feasible to raise license and user fees, to broaden tax bases, to create lotteries, and to hike "sin" taxes (especially cigarette taxes).\footnote{See generally Nicholas W. Jenny & James Orsi, Budget Balancing Tactics, 3 THE ROCKEFELLER INST. ST. FISCAL NEWS No. 7 (2003) (describing the politically feasible mechanisms for states to raise revenue in a downturn).} But even in the most liberal of states, the rates of broad-based taxes are now raised only as a last resort.\footnote{Consider the 2006 budget crisis in New Jersey, at a time when Democrats controlled the governor’s mansion and both legislative chambers. The governor’s proposed solution to the state’s budget crises was to be funded: 50% by spending cuts, 25% by license and user fees, and only 25% by raising the state’s sales tax rate from 6% to 7%. Yet where the first two components of the budget proposal were relatively non-controversial, the legislature refused to enact the sales-tax hike, which led to the government being shut down in an act of brinkmanship. See Richard G. Jones, Corzine Shuts Down New Jersey’s Government, N.Y. TIMES, July 1, 2006, available at http://query.nytimes.com/gst/fullpage.html?res=9B04E2D81530F932A35754C0A9609C8B63.} Consequently, spending cuts have become the primary response to fiscal downturns and this trend seems likely to continue for the foreseeable future.

The composition of state budgets necessitates that these spending cuts affect even the most popular of programs. Indeed, during 2003, thirty-two states enacted across-the-board spending cuts.\footnote{NASB, supra note 23, at 6.} Despite the strong public support for education spending, elementary and secondary education

[hereinafter FRAMING THE CHOICES]. Note that these figures define tax hikes as increases in the statutory tax rates and spending cuts as reductions from projected spending. Nominal spending totals (as opposed to real totals or spending as a percent of GDP) were not cut.
constitutes too large a portion of state general account budgets, at 35% of spending, to be spared from cuts. Nevertheless, cuts tend to target some spending areas more than others, hitting higher education, at 11% of spending, and Medicaid, at 21% of spending, particularly hard. As a result, average tuition fees at public universities increased by 35% between 2000 and 2004 after adjusting for inflation, while over one million residents lost their eligibility for state-assisted health insurance.

2. Why Fiscal Volatility Is Growing Over Time

Not only are states finding it harder to cope with fiscal volatility now that the continued growth of state governments has halted, but the overall magnitude of fiscal volatility has been increasing over time. The two main reasons for this growth in fiscal volatility are changes in state tax bases and changes in state spending baselines.

The first major cause of increased fiscal volatility results from tax revenues becoming more volatile due to changes in state tax bases. Different forms of taxation can be more or less volatile. Where property tax revenues remain relatively stable as the economy cycles, sales tax revenues are quite volatile, and income tax revenues fluctuate even more wildly. Yet over the past fifty years, states have gradually reduced their reliance on property taxes in favor of sales and income taxes, thereby increasing the magnitude of fiscal volatility. Moreover, the volatility of state income taxes has significantly expanded in recent years, presumably due to greater income stratification.

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45. See 2003 STATE EXPENDITURE REPORT, supra note 44, at 5. Note that Medicaid spending is sometimes only cut relative to previously authorized expenditures. The general trend of rapid growth in Medicaid spending over time may overpower cuts in previously authorized expenditures during downturns. See infra notes 53–54 and accompanying text.


47. Framing the Choices, supra note 37, at 5.

48. Federal government policies have also contributed to increased fiscal volatility at the state level. David A. Super, Rethinking Fiscal Federalism, 118 Harv. L. Rev. 2544, 2562–613 (2005).


50. Giertz & Giertz, supra note 30, at 114.

51. Vasché & Williams, supra note 21, at 42 ("[O]ther factors that have contributed to volatility in the past—namely, increased reliance on the personal income tax and increasing concentrations of income at the high end of the income distribution—are more permanent and thus likely to continue to contribute to volatility in the future.")
Partially due to these changes in state tax bases, the 2001–2003 downturn generated much larger revenue shortfalls than did previous recessions, even though the economic effects of the downturn were comparatively mild.52

The second major cause of increased fiscal volatility comes from changes in state spending baselines—most notably due to Medicaid spending. Medicaid’s spending baselines are countercyclical; more state residents generally qualify for Medicaid during downturns than during periods of economic growth.53 As such, countercyclical programs like Medicaid exacerbate fiscal volatility problems by placing greater demands on state budgets when revenues are scarce and lesser demands when revenues are plentiful. Driven by rising healthcare costs and changes in federal government policy, Medicaid grew from 10.8% of state spending in 1989 to 19.6% of state spending in 2001.54 Consequently, as revenues began to plummet during the last downturn, states found that even maintaining their previous levels of non-Medicaid spending would require cutting promised Medicaid benefits.

State-level fiscal volatility is a significant and growing problem. Faced with balanced-budget constraints, state governments must adjust either their taxes or their spending as the economy cycles. Yet this discussion of the problem raises the question why states have balanced-budget constraints in the first place. At least in theory, states could eliminate most of their fiscal volatility problems simply by running deficits during downturns and surpluses once their economies return to growth.

B. The Nature of State Balanced-Budget Constraints

In the absence of political considerations, economists generally agree that governments should run surpluses during booms and deficits during busts.55 Yet balanced-budget constraints make fiscal stimulus of this sort impossible.56

52. Giertz & Giertz, supra note 30, at 115. One reason for the dramatic revenue shortfalls following the 2001 downturn was the collapse of realized capital gains, a pattern which might not be repeated in future economic cycles. But the other causes of increased fiscal volatility are likely to continue.

53. Super, supra note 48, at 2630–32.

54. STAFF OF H. COMM. ON WAYS & MEANS, 108TH CONG., 2004 GREEN BOOK: BACKGROUND MATERIAL AND DATA ON THE PROGRAMS WITHIN THE JURISDICTION OF THE COMMITTEE ON WAYS AND MEANS app. C at 5–6 (Comm. Print 2004). Note that these figures refer to total state spending, as opposed to just general account spending (the portion of spending relevant to balanced-budget constraints). Medicaid spending is slightly smaller as a percentage of general account spending than of total spending, as some Medicaid spending is financed by dedicated revenue sources.

55. DANIEL SHAVIRO, DO DEFICITS MATTER? 205–11 (1997); Torben M. Andersen, IS THERE A ROLE FOR AN ACTIVE FISCAL STABILIZATION POLICY?, 51 CESIFO ECON. STUD. 511 (2005); see also infra notes 140–145 and accompanying text.

56. See Neil H. Buchanan, Social Security, Generational Justice, and Long-Term Deficits, 58 Tax L. Rev. 275, 294 (2005) ("The practical consequences of failing to adjust for the business cycle are especially severe for state and local governments, most of which operate under (modified) balanced budget requirements.")
As a result, state governments are forced to hike taxes or cut spending at exactly those times when economic theory calls for reduced taxes and higher spending. Conversely, state governments lower taxes and raise spending just as their economies start to overheat, thereby magnifying the harmful effects of the business cycle.57

Despite the acknowledged negative consequences of state balanced-budget constraints, there is no significant movement calling for the abolition of these constraints. Indeed, even though the written balanced-budget requirements within many states’ constitutions lack effective enforcement mechanisms, the states typically follow them anyway. What explains these puzzles? The answer has far less to do with economics than with the nature of the political process.

1. Why States Have Balanced-Budget Constraints

If states were governed by philosopher kings, there would be little need for balanced-budget constraints. In accordance with traditional Keynesian economic theory, state governments could accrue deficits during downturns and pay off the accumulated debt with surpluses generated during upturns.58 Unfortunately, few philosopher kings are elected to public office. As such, scholars have warned against trusting governments with the power to accrue deficits as far back as David Hume:

It is very tempting to a minister to employ such an expedient, as enables him to make a great figure during his administration, without overburdening his people with taxes, or exciting any immediate clamors against himself. The practice, therefore, of contracting debt will almost infallibly be abused, in every government. It would scarcely be more imprudent to give a prodigal son a credit in every banker’s shop in London, than to empower a statesman to draw bills, in this manner, upon posterity.59

Politicians generally benefit both from cutting taxes and from increasing spending on popular programs. When politicians are not required to pay for current expenditures with current taxes, they face strong incentives to run up ever-greater deficits.60 Absent some form of balanced budget constraint, nothing prevents lawmakers from using deficits to finance structural imbalances between taxes and spending, rather than limiting deficit use to

59. DAVID HUME, ESSAY ON PUBLIC CREDIT (1752).
coping with downturns. Although accrued debt must eventually be paid off, politicians can leave this task to the future, when they will presumably no longer hold office.

It was precisely this problem that caused states to adopt balanced-budget requirements in the nineteenth century. States accrued ever-increasing levels of debt in order to finance infrastructure projects without raising taxes. After the national economy tanked in the late 1830s, states found they had stretched themselves past their limits. Throughout the 1840s, state after state defaulted on its debts. State governments responded to these debt crises by enacting balanced-budget requirements into state law. Whether as a direct result of these new formal balanced-budget requirements, or due to the debt crises fostering an informal norm of budget balancing, the states have largely refrained from deficit spending since the 1840s.

Underscoring the importance of state balanced-budget constraints, the incentives for deficit spending might be even stronger today than in the nineteenth century. The political landscape is currently divided between one party that seeks to shrink the size of government, and another party that seeks to increase (or at least maintain) the current level of government spending. Conservatives may be tempted to pass tax cuts during upturns, even when they realize the fiscal situation is unsustainable. Through this strategy, known as "starving the beast," a conservative government can make it harder for subsequent liberal governments to increase spending. Moreover, by campaigning for tax cuts without specifying which spending programs will eventually need to be curtailed in order to pay for the tax cuts, conservatives can take advantage of voter myopia as to the connection between taxes and

61. See infra Part I.C for a discussion of why administratively mandated limits on debt financing are unlikely to solve the fiscal volatility problem.

62. The incentives for this sort of behavior may be even stronger due to term limits on state officials.


64. Heins, supra note 63, at 7; Ratchford, supra note 63, at 79; Sterk & Goldman, supra note 63; Wallis & Weingast, supra note 63, at 342-49.

65. Heins, supra note 63, at 7; Ratchford, supra note 63, at 79; Sterk & Goldman, supra note 63; Wallis & Weingast, supra note 63, at 342-49.

66. Heins, supra note 63, at 7; Ratchford, supra note 63, at 79; Sterk & Goldman, supra note 63; Wallis & Weingast, supra note 63, at 342-49.


spending. As liberals face the opposite incentives—to campaign for deficit-financed spending increases in order to prevent future conservative governments from reducing taxes—deficits would likely grow to dangerous levels in the absence of balanced-budget constraints.

In essence, each side can benefit from playing chicken. Instead of working together proactively on a sound fiscal policy, conservatives can push for tax cuts and liberals for spending increases, until all the slack in the budget has been used up. Each side hopes the other will give in first—before the state succumbs to bankruptcy—with conservatives hoping that liberals will eventually agree to cut spending, and liberals hoping that conservatives will eventually consent to tax hikes. But if both sides delay compromise for too long, the end result may be tragedy.

2. How States Respond to Balanced-Budget Constraints

It is often noted that the written balanced-budget requirements within many state constitutions lack effective enforcement mechanisms. Even to the extent states are legally required to match expenditures with revenues, states can use a variety of "budgetary gimmicks" to create the appearance of balance without actually adjusting either taxes or spending. For instance, during the 2001–2003 downturn, states played accounting games, raided pension funds, sold state assets, securitized future revenue streams, and engaged in concealed borrowing. Taken to the extreme, state governments could simply fake their accounting statements to avoid making painful adjustments during downturns.

69. Jonathan Baron & Edward J. McCaffery, Starving the Beast: The Political Psychology of Budget Deficits, in FISCAL CHALLENGES, supra note 63, at 221. The advantages of campaigning for tax cuts without specifying which spending programs will be cut can be explained both by the political psychology literature, as in the Baron and McCaffery article cited above, and by more traditional public-choice models. When spending reductions are specified, the beneficiaries of the spending have strong incentives to campaign against tax cuts. When spending cuts are left unspecified, the beneficiaries of each spending program have only a probabilistic chance of seeing their benefits cut, and thus have reduced incentives to campaign against the tax cuts as compared to the known beneficiaries of the tax cuts.

70. This may be currently happening at the federal level. See infra Part I.D.

71. Even if members of either the liberal or conservative coalitions would prefer to limit spending hikes or tax cuts (respectively) in order to restore slack to the budget, they may refrain from doing so out of fear that the opposing coalition will simply take advantage of the slack to advance that coalition's preferred use of revenues.


73. Petersen, supra note 72.
Despite this, states make only limited use of budgetary gimmicks. During the recession of the early 1990s, for example, budgetary gimmicks were estimated to have accounted for only 19% of state responses to fiscal volatility; the remaining 81% was split between tax hikes and spending cuts. Similarly, during the 2001–2003 downturn, these gimmicks were estimated to have accounted for only 24% of state responses to fiscal volatility. Typically, states rely heavily on budgetary gimmicks and rainy-day funds during the first year of a downturn, but then turn to more painful coping measures during subsequent years, once these easy methods have been exhausted.

Why don’t states make greater use of budgetary gimmicks, or simply ignore their balanced-budget requirements all together? The literature posits two distinct answers to this question. First, states may fear the disciplining power of capital markets. As Richard Briffault argues:

The states lack the fiscal and monetary tools and the tax base of the federal government. States can neither print money nor close their borders to prevent residents and businesses from fleeing to other jurisdictions to avoid high levels of state taxation. In order to borrow, a state must demonstrate to potential lenders its capacity to repay its debts. If it persistently ran a significant deficit, its creditworthiness would be undermined. It would have to pay a substantial penalty in terms of higher interest rates or, ultimately, risk loss of access to capital markets. States are like households or businesses. They balance their budgets not necessarily because their constitutions require it—after all, households and businesses are not subject to constitutional requirements—but because the marketplace demands it.

Second, states may be constrained by norms against running deficits. According to a survey by the National Association of State Budget Officers:

"[T]he most important factor contributing to balanced budgets is not an enforcement mechanism or a provision specifying how a shortfall will be made up. Rather it is the tradition of balancing budgets, the mindset this tradition creates, and the importance placed on balanced budgets that result in states complying with their requirements."
Whether the cause is fear of capital markets, adherence to antideficit norms, or a combination of these two factors, the fact remains that "most states balance their budgets most of the time whether or not they are required by their constitutions to do so." Although states use budgetary gimmicks as a partial response to fiscal volatility, states deal with the majority of volatility through a combination of tax and spending adjustments.

Ultimately, what matters is not whether a state has a balanced budget requirement written into its constitution, but the extent to which a state's political community operates under a norm of budget balancing, and the extent to which financial markets punish departures from this norm. From here on out, this Article uses the term "balanced-budget constraints" to refer to budget-balancing norms and financial market discipline, in addition to the effects of the states' formal balanced-budget requirements.81

C. The Inadequacy of First-Best Solutions

The bulk of this Article analyzes second-best means for dealing with fiscal volatility. Assuming that states cannot solve their fiscal volatility problems directly, they should respond to the volatility so as to minimize its harmful effects. Yet before proceeding to discuss second-best coping mechanisms, it is worth spending a little more time evaluating potential first-best solutions.82
As this Article has discussed, the most direct means for resolving fiscal volatility—relaxing state balanced-budget constraints—is probably undesirable due to the nature of the political process. But if balanced-budget constraints prevent states from accruing deficits during downturns, might states adopt the opposite policy instead? In theory, states could solve their fiscal volatility problems by saving the surplus revenues generated during upturns and using these saved revenues to finance spending during downturns.

Most states do indeed save some of their surplus revenues in "rainy-day funds." Yet states fall far short from adequately financing these funds. For example, although states invested far more heavily in rainy-day funds during the 1990s than during any previous boom, these funds still covered less than one-sixth of the revenue shortfalls during the subsequent bust.

The reason states fail to adequately finance their rainy-day funds is the same reason states let deficits grow to dangerous levels in the absence of balanced-budget constraints. Like the decision to forgo deficit spending, investing in rainy-day funds constitutes a "political gift[] from one period's policymakers to some unknown successors." Politicians can advance both their personal electoral prospects and their partisan agendas by using surplus revenues for cutting taxes or increasing spending, rather than saving the revenues in rainy day funds.

There is some scholarly discussion of mechanisms for forcing states to save more of their surplus revenues during economic booms. At the most extreme level, we might imagine an administrative agency requiring surplus revenues to be invested in rainy day funds, or else raising state borrowing limits during busts and lowering them again during periods of growth. Unfortunately, although measures of this sort could be helpful on the margin, even the proponents of these measures do not claim they can fully solve state fiscal volatility problems.

83. See supra Part I.B.1.
85. NASB, supra note 23, at 10–11.
86. Robert Zahradnik, Ctr. on Budget & Pol'y Priorities, Rainy Day Funds: Opportunities for Reform 1 (2005), http://www.cbpp.org/files/4-16-07sfp.pdf [hereinafter Rainy Day Funds] (indicating that states had $30 billion in reserves to cover a need of approximately $250 billion).
87. Super, supra note 48, at 2643.
88. See supra Part I.B.1.
89. See, e.g., Rainy Day Funds, supra note 86; Gamage, supra note 82, at 664; Yilin Hou & William Duncombe, State Saving Behavior: Effects of Two Fiscal and Budgetary Institutions, 28 Pub. Budgeting & Fin. 48 (Fall 2008); Super, supra note 48. An extended discussion of these measures and their limitations is beyond the scope of this paper. For an introduction to the topic, see Dye & Merriman, supra note 33, at 245–46.
90. See, e.g., NASB, supra note 23, at 11; Giertz & Giertz, supra note 30, at 130.
Moreover, even if politicians could be forced to adequately finance rainy day funds, they lack the information required to do so. State-level budget forecasts have done a poor job of predicting future revenues: “[t]oo often decisionmakers ‘overreact’ and assume that the future will be like the immediate past.” Budget analysts tend to be overly optimistic during booms and overly pessimistic during busts. Analysts have poor information about “when business-cycle turning points will occur . . . [and] about how much the economy will expand or contract. In practice, it is hard to distinguish cyclical upswings from long-term growth.” Although reformers should certainly press states to make greater use of rainy-day funds, and there is room for more debate on how to improve the operation of these funds, first-best measures of this sort have little chance of ever resolving the fiscal volatility dilemma.

As alternative first-best solutions, states could look to the private sector or to the federal government to provide revenue insurance, with the states paying higher premiums during economic booms and receiving payouts during busts. Looking first to the feasibility of private-sector insurance, similar problems arise as with borrowing and rainy-day funds. State governments cannot purchase insurance policies during downturns because doing so would be equivalent to borrowing. As with direct borrowing, purchasing insurance that paid out immediately, but with premiums not due until some later period of economic recovery, would both tie the hands of future governments and create potential for abuse. During economic booms, state governments could certainly purchase insurance policies, just as they could contribute to rainy-day funds. Yet governments lack the incentive to make these purchases during strong economic periods. Unless our forecasting technologies improve dramatically, it is unrealistic to expect state governments operating during strong economic

91. NASB, supra note 23, at 11.
92. Id.
93. Dye & Merriman, supra note 33, at 246.
94. Id. at 245. Dye & Merriman highlight some of the difficulties inherent in relying on saving during boom years to resolve fiscal volatility problems:

U.S. business cycles have not been symmetric—expansions have lasted about five times as long as recessions. Observed revenue cycles are also asymmetric, with revenue above trend for about four out of every six years . . . . A government that wants to keep spending equal to the average or trend level of revenue will be obligated to accumulate surpluses long after actual revenues have begun to fall. Because the expansion lasts so much longer than the contraction, the accumulated surplus must reach a very high peak (more than $1,000 per capita or 50 percent of average annual revenues in our example). And, also because of the asymmetry, the surplus would disappear in extremely short order once revenues dip below trend. We doubt that many political actors could resist the pressure to increase spending or cut taxes with surpluses of this magnitude and could defend reserving so much revenue as insurance against future declines.

Even if sufficiently large rainy-day fund contributions could be mandated in light of forecasting problems, politicians could easily raid these funds, either directly or indirectly through the use of budgetary gimmicks. The impulses that lead the ordinary political process to channel all available revenues into tax cuts and spending hikes can only be overcome through powerful countervailing pressures—such as from capital markets or from antideficit norms. Historically, these pressures have not operated to force saving during upturns.
conditions to prepare adequately for later downturns.

Looking finally to federal government policies, the federal government could mitigate state-level fiscal volatility problems by providing increased countercyclical budget support. Since the federal government can freely accrue deficits during downturns while state governments cannot, it arguably makes sense for the federal government to provide additional block grants to states during busts, or to increase financing for countercyclical spending programs like Medicaid. But with the notable exception of the Obama administration’s recent stimulus package, the trend in federal government policy has been to provide less countercyclical budget support over time. Moreover, as the next Section will argue, the federal government might eventually adopt some sort of balanced budget constraint itself, thereby reducing its potential to provide countercyclical support.

D. The Fiscal Volatility Problem at the Local, Comparative, and Federal Levels

While this Article focuses on the fiscal volatility problem as it affects the U.S. states, most of the Article’s prescriptions also apply to the local, comparative, and (potentially) to U.S. federal government levels.

Many local governments have been troubled by severe fiscal volatility. Indeed, some of the larger cities have experienced worse fiscal volatility problems than those faced by many states. Essentially all of this Article’s analysis holds for local-government fiscal volatility as well as for state-level volatility.

Similarly, at the comparative level, many developing nations face balanced-budget constraints that are as binding as those confronting the U.S. states. As with U.S. state governments, the main explanations for these phenomena are limitations on the supply of credit- and voter-enforced norms

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95. Super, supra note 48, at 2649.
96. See id. at 2575.
97. See, e.g., Edgerton et al., supra note 12, at 147 (noting that “significant distress” pervades the local government sector); Steven G. Craig, How a City Can Survive a Boom and Bust Cycle Without Bankruptcy: The Case of Houston, in 1997 Proc. 89th Ann. Conf. Nat’l Tax Ass’n 90, 90 (noting the near-constant use of the term “urban fiscal crisis” in connection with cities over the past thirty years).
98. See Edgerton et al., supra note 12, at 147 (explaining that New York City’s budget problems in 2003 were at “the extreme of the distribution” of state and local budget crises).
against accruing deficits. The International Monetary Fund has also forced the adoption of balanced budgets in some developing countries.

Developed nations generally do not experience significant problems with fiscal volatility, as they can respond to downturns with deficit spending. Countries that have accumulated large amounts of public debt are exceptions to this rule. Developed nations have more slack in their budgets for fiscal management, but this slack can be exhausted through overuse of deficits. Once a government accrues too much debt, voter distrust and capital market discipline may require the government to apply a stricter policy of tying expenditures to revenues. In turn, this creates even more serious fiscal volatility dilemmas. Accordingly, both developing nations and developed countries that have accumulated significant debt may benefit from this Article’s suggestions for coping with fiscal volatility.

At the federal level in the United States, balanced budgets were the norm throughout most of the country’s history. The federal government employed debt financing during some wars and recessions. Yet these debts were gradually paid down during periods of peaceful economic growth. Although not bound by any formal balanced-budget requirement, historically most “politicians ‘would have considered it to be immoral (to be a sin) to spend more than they were willing to generate in tax revenue.” According to Brennan and Buchanan:

It may be argued that budget balance was a part of the existing fiscal constitution of the United States prior to the Keynesian revolution in the theory of economic policy. Even if the constitution did not contain a formal, written requirement for budget balance, governmental decision makers acted as if such a constraint did limit their fiscal

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103. Alesina, Tabellini & Campante, supra note 60, at 1007 n.2.

104. There are additional complications influencing how national governments should respond to fiscal volatility that are not considered in this Article, due to its focus on the U.S. state level. The Article’s prescriptions should be viewed as a relevant contribution to the literature on comparative- and national-level fiscal volatility, but not as an authoritative guide for coping with fiscal volatility on these levels.


behavior.\textsuperscript{108}

This model of budgetary balance lost most of its foundations after the Great Depression, and appears to have fallen apart in recent years.\textsuperscript{109} The 1980s witnessed a “radical departure” from historical practices “as budget deficits accumulated in a period of peace and sustained growth.”\textsuperscript{109} Congress subsequently experimented with limited forms of formal balanced-budget requirements, such as the Gramm-Rudman-Hollings Balanced Budget Act.\textsuperscript{110} The Senate even came close to passing a balanced budget amendment to the U.S. Constitution, with the measure failing by only one vote.\textsuperscript{111} Whether as a result of these measures, or due to the temporarily revitalized antideficit norms behind them, the budget briefly returned to surplus as the economy boomed during the late 1990s.\textsuperscript{112}

Unfortunately, these surpluses quickly evaporated, due to a combination of tax cuts and an economic downturn.\textsuperscript{113} Although the economy later returned to growth, the fiscal outlook continued to deteriorate even during the boom years, as Congress passed new spending—such as a massive prescription drug benefit—and additional tax cuts.\textsuperscript{114} Instead of generating surpluses to pay off accumulated debts, the government continued to run large deficits. With the onset of the recent financial crisis, deficit levels have skyrocketed.\textsuperscript{115} The long-term outlook is even bleaker, as growth in Medicare and Social Security

\textsuperscript{110.} Alesina, supra note 58, at 6.
\textsuperscript{112.} Theodore Seto, Drafting a Federal Balanced Budget Amendment that Does What It Is Supposed to Do (And No More), 106 YALE L.J. 1449, 1451 (1997). Critics cited the amendment’s lack of enforcement mechanisms as evidence that it would not have actually prevented deficit spending. Supporters responded that the amendment’s symbolic value would have been enough to reestablish the antideficit norm that governed U.S. political culture for most of its history. Compare Staudt, supra note 105, with Buchanan, supra note 107.
\textsuperscript{113.} Alesina, Budget Surplus, supra note 58, at 3.
\textsuperscript{115.} Id.
entitlements are expected to create a fiscal gap of unprecedented magnitude.  

In short, the federal government appears to be experiencing a similar dynamic to the one that caused the states to default on their debts and adopt balanced-budget requirements in the nineteenth century. The national government has more slack in its budget than the states or than any foreign nation, but this slack is not infinite. As Daniel Shaviro writes:

To call our fiscal policy over the last fifty years a giant Ponzi scheme is not hyperbole but precise analytic description. Each generation has come out ahead by passing on a larger deferred tax bill to the next. However, the growth of unfunded obligations—less from explicit debt than from Social Security and Medicare—relative to GDP indicates that the Ponzi scheme probably cannot be sustained in its current form for much longer.

If this fiscal “Ponzi scheme” collapses, the federal government will need to transition back to a norm of greater budgetary balance. Congress might have the political courage to enact this transition directly, overcoming the collective action problems that led to the current dilemma. But it seems more likely that Congress will first pass some form of balanced-budget constraint, as it considered doing in the late 1980s and 1990s, in the hopes of fostering a norm of budget balancing. Alternatively, credit markets or voters might apply external pressure to force the government to better tie expenditures to revenues. In either case, the federal government may well face fiscal volatility problems of its own at some point in the future.

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117. Id.
118. See supra notes 60–66 and accompanying text.
119. Shaviro, supra note 55, at 308.
120. Arguably, the currently dominant deficit measurements are inadequate for this purpose and will need to be replaced by alternatives that better account for future liabilities. See id.
121. By using a balanced-budget constraint as a precommitment device, Congress could potentially overcome the collective action problems that hinder efforts to address directly the sources of fiscal unsustainability. This was the idea motivating the Gramm-Rudman-Hollings Act. See Stith, supra note 111, at 621–69. Balanced budget constraints might also serve to reassure government bond holders or taxpayers (or anyone concerned about inflation), once painful adjustments are made, that the dynamics leading to unsustainability will not be repeated. This was the main reason states adopted balanced-budget constraints after the debt crises of the 1900s. See supra notes 60–66 and accompanying text.
122. This is essentially what has happened in many developing countries and in developed nations that have accrued unsustainable levels of debt. See supra notes 102–104 and accompanying text.
123. Notably, the magnitude of fiscal volatility has increased dramatically at the federal level in recent years, and this volatility may be interfering with the reestablishment of antideficit norms. See Edmund L. Andrews, Those Wild Budget Swings, N.Y. TIMES, July 16, 2006 at 4. During upturns, politicians can claim credit for deficit reductions that are merely cyclical. This has caused some commentators—and possibly a significant number of voters—to conclude that deficits do not matter or that taxes can be cut without revenue loss. See DANIEL SHAVIRO, TAXES, SPENDING, AND THE U.S. GOVERNMENT’S MARCH TOWARDS BANKRUPTCY 53 (2007) (quoting former Vice President Cheney as claiming “[d]eficits don’t matter” and proceeding to discuss the
II
ORDINARY POLITICS

Fiscal volatility is a significant and growing problem. The political debate tends to focus on the steady-state settings for tax and spending policies. But however these programs are set in their steady states, at least some components of state fiscal policy must also fluctuate as the economy cycles. Volatility must be allocated to some combination of tax and spending policies.

This Part addresses the ordinary politics question: what is the optimal allocation of fiscal volatility across state tax and spending programs? Ignoring political considerations, which programs should states fluctuate as their economies cycle?

Since political considerations are what prevent states from implementing first-best solutions to fiscal volatility, it may seem strange to discuss second-best coping strategies while ignoring their political feasibility. Part III of this Article will thus analyze procedural mechanisms for coping with fiscal volatility within the realm of institutional-design policy. Yet before we can determine how budgetary processes should be shaped to influence ordinary political behavior, we need to know which political behaviors we ought to influence.

States have numerous policies they can adjust to cope with fiscal volatility. For example, states can increase and decrease spending programs, either through across-the-board hikes and cuts, or by targeting specific programs. Alternatively, states can raise and lower the rates of broad-based taxes (such as income, sales, and property taxes) or narrower taxes (such as luxury taxes and capital gains taxes). Or states can broaden and narrow their tax bases, altering the scope of what is subject to taxation. States can also raise and lower license and user fees, or expand and contract the use of other means for generating revenues. States can respond to fiscal volatility by fluctuating any of these policies, or any combination of the policies. Yet however it is allocated, fiscal volatility creates economic harm due to risk aversion and from planning costs.

That individuals are generally risk averse is a central feature of the economy and underlies much of financial economics. Investors charge a substantial risk premium before investing in volatile assets, and certain returns are greatly preferred to variable returns. Fiscal volatility increases the risk and uncertainty inherent in the economy. As Louis Kaplow explains, instability of government policies—such as fluctuating tax or spending programs—is as much a source of risk and uncertainty as are changes in the economic climate; “[w]hether imposed by the government, by nature, or a casino, there is risk all

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political of budget deficits).

124. KENNETH ARROW, ESSAYS IN THE THEORY OF RISK-BEARING 90 (1971).
the same."\textsuperscript{125}

Moreover, fluctuations in government policies create planning costs for anyone that the policies affect. Members of the business community have long complained that "they cannot make plans if they don't have confidence in the tax structure."\textsuperscript{126} Similarly, the directors of government programs find it difficult to plan when they do not know the future size of their budgets, as do the programs' beneficiaries.

Due to factors like risk aversion and planning costs, fiscal volatility is harmful regardless of how it is managed. Yet some strategies for coping with fiscal volatility are more harmful than others. In recent years, the majority of fiscal volatility has been allocated to spending programs, with broad-based tax hikes becoming increasingly rare.\textsuperscript{127} The remainder of this Part argues that this allocation is far from optimal. Contrary to current policy, states should deal with the majority of fiscal volatility by raising and lowering the rates of broad-based taxes.

The rationale for this conclusion comes from risk-allocation theory. Lawyers and economists have spent decades developing principles for how best to allocate forms of volatility, risk, and uncertainty.\textsuperscript{128} These principles play an essential role in our understandings of numerous policy areas, particularly tort law and insurance regulation.\textsuperscript{129} This Article is the first to apply these principles to the fiscal volatility problem.\textsuperscript{130}

The central normative finding of risk allocation theory is the principle of risk spreading: all else being equal, dispersed risks are less harmful than

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  \item \textsuperscript{126} David S. Bizer & Kenneth L. Judd, \textit{Taxation and Uncertainty}, 79 \textit{Am. Econ. Rev.} 331, 335 (1989).
  \item \textsuperscript{127} \textit{See supra} Part I.A.
  \item \textsuperscript{128} These are related concepts. From the perspective of actors affected by tax or spending programs, fiscal volatility can be thought of as a form of either risk or uncertainty. Although the terms "risk" and "uncertainty" have distinct meanings, the differences between them are unimportant for our purposes. I will thus use the terms "volatility," "risk," and "uncertainty" interchangeably. For more on this topic, see, e.g., FRANK H. KNIGHT, \textit{Risk, Uncertainty and Profit} (1921); Arrow, \textit{supra} note 124; History of Economic Thought Website, Choice Under Risk and Uncertainty, http://cepa.newschool.edu/het/essays/uncert/choicecont.htm (last visited Mar. 23, 2010). When distinctions are made between the terms "risk" and "uncertainty," "risk" refers to when future outcomes are unknown, but when the probability distribution of those outcomes is known. In contrast, "uncertainty" refers to when neither future outcomes nor the probabilities of those outcomes occurring are known. Knight at 233–34.
  \item \textsuperscript{129} \textit{See}, e.g., Guido Calabresi, \textit{Some Thoughts on Risk Distribution and the Law of Torts}, 70 \textit{Yale L.J.} 499 (1961).
  \item \textsuperscript{130} There is an existing literature analyzing the effects of uncertainty on public investment decisions. However this literature focuses on idiosyncratic risks affecting only a single government program. The literature does not discuss how systematic risks—like fiscal volatility—should be allocated between taxation and spending. \textit{See}, e.g., Kenneth J. Arrow & Robert C. Lind, \textit{Uncertainty and the Evaluation of Public Investment Decisions}, 60 \textit{Am. Econ. Rev.} 364 (1970); S.M. Kanbur, \textit{Risk Taking and Taxation: An Alternative Perspective}, 15 \textit{J. Pub. Econ.} 163 (1981).
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concentrated risks. Risk spreading can be accomplished directly by allocating risk and uncertainty across as many individuals as possible, or across as many sectors of the economy as possible. Risk spreading can also be accomplished indirectly, by allocating risk and uncertainty to actors who are better able to either purchase insurance against volatility or to self-insure through borrowing and saving. To see why coping with the majority of fiscal volatility by adjusting the rates of broad-based taxes furthers the goal of risk spreading, it is useful to make two comparisons.

The first comparison considers the risk-bearing characteristics of taxpayers as a class, as opposed to the risk-bearing characteristics of the beneficiaries of public spending as a class. In this first comparison, it is important to realize that state fiscal policies are redistributive. At least on the margin, increasing state taxation by a dollar in order to fund an additional dollar of spending tends to benefit the poor more than the wealthy. Redistributing volatility from the poor to the wealthy accomplishes risk spreading directly, due to the simple fact that the wealthy have more money. Further, redistributing volatility from the poor to the wealthy accomplishes risk-spreading indirectly, because the wealthy are better able to borrow during downturns, save during upturns, and purchase insurance from third parties.

The second comparison considers the risk-bearing characteristics of aggregate government-spending activities as opposed to those of aggregate private-sector-economic activities. First, it is important to understand that, in the absence of tax rate adjustments, revenue volatility is several times larger than economic volatility. Hence, tax rate adjustments are necessary to spread fiscal volatility more evenly across the entire state economy, rather than concentrating the harmful effects of fiscal volatility in public-sector spending programs. Second, with regard to indirect risk spreading, political constraints limit the extent to which government spending programs can save, borrow, or insure, and the extent to which spending volatility can be efficiently allocated across subprograms. Private-sector economic actors are less constrained on these dimensions.

The principle of risk spreading thus provides a prima facie argument for why states should adjust the rates of broad-based taxes as the preferred method for coping with fiscal volatility, rather than fluctuating state government spending. However, it is important to note that not all tax rate adjustments spread risk efficiently. For example, fluctuating the rates of a narrow tax, borne by only a small portion of a state's population, would not accomplish risk spreading. Moreover, when it comes to implementation, not all state taxes can be adjusted without creating excess economic harm. For instance, fluctuating taxes on capital gains is likely a poor method for coping with fiscal volatility;

131. See infra notes 163–168 and accompanying text.
132. See infra notes 175–182 and accompanying text.
133. See infra notes 183–190 and accompanying text.
because taxpayers control the timing of when their gains are realized, they are likely to delay their gain realizations until periods with lower tax rates. In contrast, timing effects of this sort are a minor problem with respect to adjusting the rates of state property taxes. A full discussion of implementation concerns is beyond the scope of this Article, largely because implementation concerns are likely to differ significantly amongst the various states. Still, it is important to remember that the risk-spreading principle only supports adjusting the rates of *broad-based* state taxes, not of all state tax instruments.

The remainder of this Part further elaborates the risk-spreading argument for coping with the majority of fiscal volatility by adjusting the rates of broad-based taxes. Part II.A sets the stage for conducting an applied risk analysis by discussing several background issues and then explaining how risk spreading minimizes the harm from both risk aversion and planning costs. Part II.B then demonstrates why more risk spreading is accomplished by adjusting the rates of broad-based taxes than by fluctuating state government spending.

### A. Setting the Stage for an Applied Risk Analysis

This Part argues that the question of how to best allocate fiscal volatility—whether by fluctuating spending in the public sector, or by fluctuating tax rates in the private sector—is a question of applied risk analysis. However, a few background issues must be resolved before turning to risk analysis theory.

To begin, one of this Article’s central premises is that the question of how to allocate fiscal volatility optimally can be separated from the question of the optimal size of state government. Yet this premise requires further support. After all, as a conservative critic might question, “If state government spending is largely wasteful, and if taxes are extremely harmful, shouldn’t we allocate volatility primarily to wasteful state spending while shielding the private sector from the harmful effects of tax rate fluctuations?”

Of course, the conservative critic is correct insofar as one accepts the assumptions underlying her argument. If states tax and spend more than is optimal, then the harm from tax rate fluctuations will be magnified, and the harm from spending fluctuations reduced. Conversely, if states raise too few dollars through taxes, and fund public services below the optimal level, then allocating fiscal volatility to spending will be more harmful than allocating volatility to tax rates—even ignoring the implications of applied risk analysis.

Determining the optimal size of a state government requires making tradeoffs between the excess burden caused by taxation, on the one hand, and the public good effects and the desirable redistribution caused by public spending on the other hand.134 This Article does not claim that the current size

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134. See, e.g., Vidar Christiansen, *Two Approaches to Determine Public Good Provision under Distortionary Taxation*, 60 Nat’l Tax. J. 25 (2007); Louis Kaplow, *Public Goods and The*
of state governments is optimal. However, if a state’s government is either too large or too small, the appropriate response is to address this imbalance directly. Once steady-state optimality has been restored, the question of how to allocate volatility around the new steady state remains an issue.

This Article’s inquiry into how states should cope with fiscal volatility is essentially a second-order question. In other words, if one strongly believes that states currently spend either dramatically too much, or far too little, then those beliefs will affect one’s conclusions about how states should cope with fiscal volatility. Yet whatever a state’s non-cyclical level of taxes and spending, this level has been effectively chosen by the state’s dominant political coalition. A dominant political coalition may choose to change the steady-state level of taxes and spending. But whatever choices a political coalition makes about steady-state policy, it must also decide how to allocate volatility around that steady state. This latter question is primarily a matter of applied risk analysis.135

As such, the analysis in this Part proceeds as though steady-state levels for taxes and spending are approximately optimal. Additionally, this Part assumes that state spending as a whole is neither a luxury good nor an essential, as compared to aggregate private-sector spending.136 To illustrate, entertainment purchases are thought to be luxury goods as compared to food purchases. As personal income rises, a typical individual will spend more on entertainment than on food. If the same relationship held for public goods as compared to private consumption, we might want state governments to increase spending during upturns and cut spending during downturns.

Yet there is no particular reason to think that government expenditures as a whole are luxury goods as compared to aggregate private expenditures. The majority of state general-account spending funds four types of expenditures: elementary and secondary education (36%), Medicaid and other public assistance (19%), higher education (12%), and corrections (7%).137 Although these expenditures are probably luxury goods when compared to food purchases, they are probably not luxury goods when compared to many entertainment purchases.

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135. Without quantifying the amount of harm that could be mitigated by improving the risk allocation of fiscal volatility, it is hard to know how serious the risk-spreading problem is as compared to the size-of-government problem (if there even is a size-of-government problem). Yet there already exists an enormous literature examining the size-of-government problem, whereas this is the first paper to evaluate the risk-spreading implications of state-level fiscal volatility. In order to analyze effectively the risk-spreading decision, it is useful to cabin the size-of-government decision.


When tax adjustments cause individuals to reduce their private consumption, individuals can still choose which elements of private consumption on which they will spend less. Hence, when taxes are raised during downturns, individuals should respond by reducing spending primarily on luxury goods. When public spending is cut during downturns, program administrators can likewise respond by reducing spending primarily on the most luxury elements of their spending programs. But, in contrast to private consumers’ decision making, the government’s process for determining which public expenditures to cut tends to be more haphazard and political. Moreover, public sector managers have incentives to maximize the appearance of hardship, so as to fight off calls for further cuts to their budgets; thus, they do not necessarily allocate spending cuts to the most luxury aspects of their programs. Overall, it seems reasonable to assume that public sector spending is neither a luxury good nor an essential, as compared to private-sector spending, at least as a first-order (or perhaps zeroth-order) approximation.

As a final background issue, it is worth briefly discussing the relevance of fiscal stimulus. According to traditional Keynesian models, governments should borrow during economic downturns in order to both reduce taxes and increase spending, while doing the opposite during upturns. However, balanced-budget constraints prevent state governments from borrowing during downturns, thus requiring tax hikes and spending cuts—the opposite of the traditional Keynesian prescriptions. Hence, for the purposes of this Article, the stimulus question depends on whether tax hikes or spending cuts are more harmful when a state’s economy operates below trend.

Although the literature on this question is sparse, a few economists have argued that raising taxes to increase spending during downturns may have desirable stimulatory effects. Nevertheless, the stimulus differences between tax and spending fluctuations at the state level are probably small. Plus, there is considerable uncertainty in the macroeconomic literature about the efficacy of Keynesian stimulus even at the federal level, where deficit-financed stimulus is possible and much larger sums of money are at stake. As applied to the

138. See Super, supra note 48, at 2611–40. See also infra notes 185–187 and accompanying text.

139. A “zeroth-order approximation” is roughly equivalent to an educated first guess.


141. See Super, supra note 48, at 2607–11.


144. See, e.g., Martin Feldstein, Rethinking the Role of Fiscal Policy, 99 AM. ECON. REV.
fiscal volatility question, the stimulatory differences between tax and spending fluctuations should probably be considered a minor factor in the overall analysis.\textsuperscript{145}

Moving beyond the background issues, the remainder of this Part analyzes the question of how states should allocate fiscal volatility as a question of applied risk analysis. Risk analysis theory traditionally asks which actors and institutions are best able to manage risk or uncertainty to minimize their harmful effects. As applied to fiscal volatility, risk analysis likewise inquires into whether state spending programs or private sector taxpayers are better able to cope with the risk and uncertainty that would be created by fluctuating either spending or tax rates. Part II.A will discuss how the two main risk-related harms caused by fiscal volatility can be minimized through risk spreading. Part II.B will argue that allocating the majority of fiscal volatility to tax rate adjustments rather than to spending fluctuations accomplishes maximal risk spreading.

1. The Harm from Risk Aversion

The first major harm caused by fiscal volatility flows from risk aversion on the part of individuals and economic actors. "It is widely accepted that individuals are not indifferent to uncertainty and will not, in general, value assets with uncertain returns at their expected values."\textsuperscript{146} Investors typically consider "yield to be a good thing; risk, a bad thing; gambling, to be avoided."\textsuperscript{147} Financial markets function by trading off between the expected returns of financial products and the volatility surrounding those returns.\textsuperscript{148} When the expected returns of an investment are volatile, lenders discount the returns, which forces borrowers to pay a risk premium in order to attract investment funds. Likewise, taxpayers prefer certainty about their future levels of taxation, and the beneficiaries of public spending prefer certainty about their future benefit levels. Regardless of whether it is allocated to taxes or to spending, fiscal volatility creates harm due to risk aversion.\textsuperscript{149}

\\[\text{References}\]
\\[\text{145.}\] In any case, exploring these issues more fully is beyond the scope of this Article.
\\[\text{146.}\] Arrow & Lind, supra note 130, at 364.
\\[\text{147.}\] Harry Markowitz, Portfolio Selection, 7 J. FIN. 77, 91 (1952).
\\[\text{149.}\] See, e.g., Kelly D. Edmiston, Tax Uncertainty and Investment: A Cross-Country Empirical Investigation, 42 ECON. INQUIRY 425 (2004). However, some research has found that volatility in capital income taxation can be welfare enhancing. See, e.g., Bizer & Judd, supra note 126; Michael Dotsey, The Economic Effects of Production Taxes in a Stochastic Growth Model, 80 AM. ECON. REV. 1168 (1990). See also James Alm, Uncertain Tax Policies, Individual Behavior, and Welfare, 78 AM. ECON. REV. 237 (1988) (concluding that uncertainty in the tax base may positively affect welfare, while uncertainty in tax rates generally negatively affects welfare, as tax base uncertainty—but not tax rate uncertainty—deters undesirable tax planning). But see Julie H. Collins & Daniel P. Murphy, Experimental Evidence of the Effect of Tax Rate
The standard explanation for risk aversion comes from the diminishing marginal utility of money. Individuals generally value each additional dollar less than the previous dollar, such that having $2,000 generates less than twice as much utility as having only $1,000. Consequently, individuals should and do prefer a 100% chance of winning $1,000 to a 50% chance of winning $2,000. Although the two bets have the same expected dollar value, the second bet produces a lower expected utility.

Diminishing marginal utility is not unique to money. Individuals receive diminishing marginal utility from nearly all forms of consumption. Even someone who prefers apples to oranges might select an orange in place of the hundredth apple. And while food and clothing might be more essential than entertainment items, the fuller one’s fridge and closet the more valuable the entertainment items become as compared to additional food and clothing.

In fact, the reason money produces diminishing marginal utility is that all of the goods that can be purchased with money generate diminishing marginal utility. At any income level, individuals should purchase the mix of consumption items that maximizes their potential utility from monetary purchases. But as the adage goes, “you cannot buy happiness.” Much of what individuals desire cannot be purchased on the market. The more monetary goods one owns, the less valuable additional monetary goods become as compared to nonmarket goods like love, health, and the benefits of public spending.

Just as the diminishing marginal utility from monetary goods creates risk aversion with respect to volatile tax payments, the diminishing uncertainty on security prices, investor clienteles, and tax payments, 17 J. Am. Tax Ass’n 1, 24 (1995) (“These findings imply that prior literature . . . (e.g., Alm 1988) may overestimate the welfare loss to investors and the tax revenue loss to the government as a result of tax rate uncertainty. Our results indicate investors demand ‘compensation’ for tax rate uncertainty and this ‘risk premia’ leads to higher investor expected tax payments.”).


151. Rabin and Thaler, supra note 150, at 219–30, argue that the standard view (that risk aversion arises from the diminishing marginal utility of money) cannot explain the fact that individuals are averse to small risks as well as to large risks. Instead, Rabin and Thaler suggest that risk aversion results from the biases of loss aversion and mental accounting. There are also other nonstandard theories for why individuals are averse to risk and uncertainty. See, e.g., Yoram Halevy & Vincent Feltkamp, A Bayesian Approach to Uncertainty Aversion, 72 Rev. Econ. Stud. 449 (2005). Yet, like the standard model, the nonstandard explanations for risk aversion also conclude that individuals exhibit increasing marginal risk aversion. Hence, the nonstandard views are equally consistent with the arguments of this Article as is the standard model. (Although I rely on the standard view of risk aversion in the text of this Article because it is far more widely accepted than the alternatives, I’ll note as a tangent that I am partially persuaded by Rabin and Thaler’s critique).


153. Id.

154. Even billionaires may be frustrated by crime (lack of police funding), traffic (lack of transportation spending), and the like. Purchasing a private jet or one’s own security force does not provide a perfect substitute.
marginal utility from publicly provided goods creates risk aversion with respect to volatile government spending. No matter how much one values goods like public transportation or education, at some point adding more roads and schools becomes less valuable than the private consumption that must be forgone in order to pay for the nth highway or school building.

Due to the diminishing marginal utility of money, concentrated risks are more harmful than dispersed risks. Risk spreading reduces the harm from risk and uncertainty because each marginal unit of risk affecting an individual or economic actor is more harmful than the previous units. As such, if two individuals are identical, except that one bears a high level of risk and the other a low level, then transferring a unit of risk from the high risk-bearing individual to the low risk-bearing individual will reduce the total harm caused by the risk.155 The very feature that causes risk aversion—the diminishing marginal utility of money—directly justifies the principle of risk spreading.

2. The Harm from Planning Costs

In addition to the harm created by risk aversion, fiscal volatility also creates harm due to planning costs. Risk aversion primarily affects consumption (the degree to which individuals derive value from economic goods). Risk aversion can also significantly impact production, by discouraging risky behavior that would have been expected to create value for society,156 but these effects are secondary. In contrast, planning costs primarily concern production.

Individuals and firms often need to make investment decisions in the present in order to maximize production in the future. These decisions sometimes entail sunk costs. For instance, students typically enroll in law school so as to earn a salary from practicing law. If the legal market later changes so that a student can no longer find employment, the time and money spent on law school are not refundable. Similarly, firms make capital investments in order to generate future revenues. If demand for a firm’s product subsequently evaporates, the firm may not be able to recoup the invested

155. This transfer would be efficient and welfare-enhancing following the Kaldor-Hicks methodology.

156. As Kenneth Arrow explains, supra note 124, at 137–38, “at any moment society is faced with a set of possible new projects which are on the average profitable though one cannot know for sure which particular projects will succeed and which will fail. If risks cannot be shifted, then very possibly none of the projects will be undertaken.” Volatility can deter entrepreneurs and investors from taking on risks that would be expected to improve societal welfare. Moreover, firms as well as individuals can be risk-averse. Arrow and Lind, supra note 130, at 376. Both the managers of firms and stockholders owning large blocks of shares can cause firms to act in a risk-averse fashion. Consequently, by adding risk to the economy, fiscal volatility can deter both firms and individuals from socially-desirable entrepreneurial activities. Although the additional risk caused by fiscal volatility is not directly connected to entrepreneurial activities, it may combine with the risk already inherent in these activities to deter risk-taking behavior that would not have been deterred based on the inherent risk alone.
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resources.

Public administrators must likewise make planning decisions in the presence of sunk costs. For example, schools are built based on projected future education spending. Uncertainty about how much funding will be available for hiring teachers can lead administrators to build schools that are either too small or too large. While education suffers when too many students are crammed into an overcrowded space, there is little point in having built more classrooms if funds do not permit hiring enough teachers to utilize them.

Allocating fiscal volatility to spending can force administrators to fire staff after putting them through costly training programs, to abandon construction projects that have already been partially built, or to otherwise misallocate resources over time and across types of expenses. In addition to these primary costs, volatility in public spending creates secondary costs that affect the beneficiaries of government programs and any private-sector individuals or contractors who are paid to work on the programs. If uncertain funding creates the possibility that administrators will have to fire staff or to stop paying for contractors, the administrators will have to pay more to hire the staff and contractors in order to offset staff and contractors’ risk premiums. Moreover, if the staff or contractors incur sunk costs in order to make themselves eligible for government work, volatile spending will impose further costs on the staff and contractors which will force the administrators to pay even more in order to hire their services.

Looking to program beneficiaries, spending volatility can again impose costs even above the harm that risk aversion causes. Individuals and firms often make decisions in reliance on government programs. These decisions may involve sunk costs. For instance, firms decide where to build plants based partially on the state of local roads and other infrastructure. If the state later cuts spending so that the infrastructure quality is no longer sufficient for the firm’s purposes, the firm may need to abandon the plant or pay for expensive alternatives to the infrastructure. Individuals face similar dilemmas to the extent they buy housing based on the quality of neighborhood schools. And if firms structure their severance policies—or if individuals make saving decisions—based even partially on state-funded job retraining programs or unemployment benefits, any changes to these benefits can leave individuals worse off than they would have been if they had been able to make decisions in

157. Just as planning costs can force administrators to fire staff or abandon projects during downturns, during upturns the administrators may find they have not previously hired enough staff or started construction projects early enough, and that surplus funds can thus not be used efficiently. See Matthews, supra note 49, at 306.

158. See supra note 156.

159. For instance, students must apply for teacher training programs at least a year or two in advance of seeking teaching jobs. Since volatile spending makes the availability of teaching jobs fluctuate significantly over time, this volatility probably deters some students from becoming teachers who would otherwise be inclined to enter the profession.
anticipation of the changes.

Fiscal volatility thus creates significant planning costs, whether allocated to taxes or to public spending. Just as public administrators plan based on expectations about their future budgets, taxpayers make planning decisions based on expected future returns. Volatility in taxes creates uncertainty in those returns. If a tax hike makes an economic activity unprofitable after taxes, the activity may need to be abandoned even if nonrefundable resources have already been expended on it. Additionally, as with spending, volatility in taxes also imposes secondary costs on the beneficiaries of private-sector projects and on anyone hired or contracted to work on those projects. For example, if a tax scheme makes a store unprofitable, the store may close, and anyone who worked at the store or who planned on purchasing needed items from the store will suffer.

Risk spreading can reduce the harm from planning costs because planning costs increase on the margin. All else being equal, a $2,000 loss of public funding or tax increase should create more than twice as much harm from planning costs as a $1,000 loss of funding or tax increase. Whether they operate in the public or private sectors, individuals and organizations generally maintain some level of reserves—or slack—that can be used to meet unexpected challenges. For individuals, this slack can include previously saved funds, temporarily increased work effort, favors called in from friends and family, and anything else the individual can do to cope with a negative shock without abandoning sunk resources. Similarly, organizations can ask their employees to work harder for short periods, temporarily reduce employee benefits or overhead, or engage in a variety of similar coping mechanisms.

Because individuals and organizations have only finite levels of slack, the planning costs associated with fiscal volatility should generate increasing marginal harm. While small amounts of volatility can often be dealt with through reserves, increasing levels of volatility will eventually exhaust available reserves, forcing the abandonment of sunk resources and thereby creating far larger marginal costs. Furthermore, even after reserves have been expended, we might reasonably expect organizations and individuals first to abandon projects with few sunk costs and only later to abandon projects with greater sunk costs. To the extent that economic actors can allocate the costs of volatility across subprojects, volatility should thus generate increasing marginal

160. By “unprofitable” I mean unprofitable in the economic sense; a project becomes unprofitable if the resources that must still be invested in order to complete the project could yield greater returns if diverted to an alternative use (the opportunity costs of continuing the project exceed the expected gains).

planning costs.

Just as the diminishing marginal utility of money justifies the risk spreading principle with respect to risk aversion, the presence of increasing marginal planning costs justifies the risk-spreading principle with respect to planning costs. In both cases, transferring a unit of risk from an actor facing greater additional risks to an actor facing lesser additional risks will reduce the harm caused by that unit of risk, because additional units of risk are more harmful on the margin.

B. Conducting an Applied Risk Analysis for Fiscal Volatility

As the previous Section explained, risk spreading can mitigate the harms caused by both risk aversion and planning costs—the two major harms from fiscal volatility. Hence, as a general rule, the optimal method for coping with fiscal volatility is likely the method that best accomplishes risk spreading. This Section argues that maximal risk spreading is accomplished when fiscal volatility is dealt with primarily by adjusting the rates of broad-based taxes. This argument is demonstrated first by comparing the risk-bearing characteristics of taxpayers to those of the beneficiaries of public spending, and second by comparing the risk-bearing characteristics of public spending activities to those of private-sector economic activities.

1. Comparing Taxpayers to the Beneficiaries of Public Spending

When fiscal volatility is resolved by fluctuating tax rates, the harmful effects of the volatility fall on taxpayers. Conversely, when fiscal volatility is resolved by fluctuating spending, the harmful effects of the volatility fall on the beneficiaries of public spending programs. To a large degree, these categories overlap, as every citizen of a state both pays taxes and benefits from public spending. Yet these groups do not overlap perfectly. Some state citizens will receive more net benefit (from spending minus taxes) than will others.

Taken as a whole, state fiscal policy is redistributive on the margin. Many states’ tax systems are considered regressive in that they take a higher percentage of poor taxpayers’ incomes than they do of rich taxpayers’ incomes. For instance, sales taxes are considered regressive because they typically constitute a higher percentage of poor taxpayers’ incomes than of rich taxpayers’ incomes. Nevertheless, in every state, marginal spending is sufficiently progressive so as to more than make up for these regressive taxes.

162. While not every citizen receives direct payments from a state, every citizen benefits to at least some extent from spending programs such as transportation infrastructure, education, and the criminal justice system.

As mentioned earlier, three-quarters of state general account spending falls into four major categories: elementary and secondary education (36%), Medicaid and other public assistance (19%), higher education (12%), and corrections (7%).\textsuperscript{164} Of these, Medicaid and public assistance are clearly progressive in that they primarily benefit poor taxpayers. Tax-funded education spending is also highly progressive, even though the wealthy arguably benefit more from education spending than the poor. This is because education dollars are not distributed as unequally as is income.\textsuperscript{165} Even if a rich taxpayer with an annual income of $200,000 derives twice as much value from education spending as a poor taxpayer with an annual income of $20,000, as a percent of income, the poor taxpayer still receives five times as much benefit as the rich taxpayer.

The key to the above example is that progressivity in taxes is usually measured as a percent of income, while the redistributive quality of spending is usually measured in dollar amounts. Even “regressive” sales taxes take far more in dollars from rich taxpayers than from poor taxpayers. Although education spending might provide more absolute benefit to the rich than to the poor, this disparity is unlikely to be so large as to surmount the greater dollar amounts the rich are paying in taxes. For almost all forms of state spending, raising taxes by a dollar in order to fund an additional dollar of spending should redistribute resources from rich taxpayers to poor taxpayers.

Of the four major categories of state general account spending, only corrections might be an exception to this rule. Spending on prisons and law enforcement arguably benefits the rich far more than the poor, perhaps enough to overwhelm the differences in tax dollars paid. Following similar logic, it is often argued that the wealthy derive far more benefit from government spending, as a whole, than do the poor, as there would be little or no wealth without government (in the state of nature).\textsuperscript{166} While this argument might be valid for state expenditures as a whole, its logic fails when considering state expenditures on the margin. When examining the types of spending that are actually cut during downturns and increased during upturns, it seems clear that marginal spending hikes benefit the poor more than the wealthy. The vast majority of spending fluctuations occur in the categories of Medicaid and other

\textsuperscript{164} 2003 \textit{State Expenditure Report}, \textit{supra} note 44, at 4. Again, this Article only discusses state general-account spending as this is the spending subject to balanced-budget constraints. Spending funded by the states’ capital budgets is not usually cut during downturns.

\textsuperscript{165} There is no straightforward way to calculate the extent to which different income groups benefit from education spending. But, at least to me, it seems implausible to think that the benefits of education spending are distributed as unequally in dollar values as are incomes.

public assistance, higher education, and elementary and secondary education.\textsuperscript{167} Raising taxes by a few percentage points in order to fund additional spending in these areas almost certainly benefits the poor more than the wealthy.\textsuperscript{168}

Hence, allocating volatility to taxes has a greater impact on wealthy taxpayers, and allocating volatility to spending has a greater impact on poorer taxpayers. To make this observation into a normative argument, we need only conclude that volatility causes less overall harm when allocated to wealthy taxpayers than when allocated to poorer taxpayers.

The first argument supporting this conclusion examines the direct risk-spreading effects of redistributing volatility. Remember that both risk aversion and planning costs create increasing marginal harm. Each additional unit of volatility creates more harm from both risk aversion and planning costs than did the previous units. For risk aversion, harm increases on the margin due to the diminishing marginal utility of money. For planning costs, harm increases on the margin due to finite slack resulting in increasing marginal planning costs.

Looking first to risk aversion, the diminishing marginal utility of money means that any given amount of risk will be more harmful when allocated to an individual with less money and less harmful when allocated to an individual with more money. To illustrate, for a taxpayer with an annual income of $10,000, the possibility of that income increasing or decreasing by $2,000 constitutes a very large risk. Yet if that same risk is instead allocated to another taxpayer with an annual income of $200,000, the $2,000 risk becomes much smaller as a percentage of income. The first taxpayer would need to make significant changes to her consumption portfolio in response to losing 20% of her income. In contrast, the second taxpayer would be far less affected by the need to decrease her consumption by only 1%. If the two taxpayers are otherwise identical—except for their differing monetary resources—the first taxpayer stands to lose far more expected utility from the volatility than does the second taxpayer.\textsuperscript{169}

A similar result follows for planning costs, as long as there is a connection between an individual's monetary resources and her level of slack or reserves. Although this connection is obviously not perfect, when abstracting across an

\begin{flushright}
\textsuperscript{167} See \textit{supra} note 137 and accompanying text.
\textsuperscript{168} For an exception that demonstrates the general rule, this result might not apply if the taxes raised to fund the additional spending were head taxes—taxes that take the same dollar amount from each taxpayer. Or, somewhat more plausibly, if only user fees and licenses were raised to pay for additional spending, these revenue sources might be sufficiently regressive so as to make the net effect nonredistributive. But raising tax rates on the margin for the major-broad based state taxes (e.g., sales, income, and property) to fund additional state spending in the major categories will almost certainly be redistributive.

\textsuperscript{169} Stated more formally, the utility loss that the first taxpayer would experience is higher than the utility loss that the second taxpayer would experience, as the utility-to-dollar values are higher for the first taxpayer than for the second taxpayer.
\end{flushright}
entire state population, it seems reasonable to conclude that those with higher income levels will also have more slack built into their budgets.\textsuperscript{170} After all, the more income one has, the more one can afford to spend, and the more opportunity there is to reallocate one’s resources across spending categories when faced with a downturn. Hence, the planning costs caused by fiscal volatility are also likely to be more harmful when allocated to poorer taxpayers than when allocated to wealthier taxpayers.

The indirect risk-spreading effects of redistributing fiscal volatility function much like the direct planning-cost effects.\textsuperscript{171} Indirect risk spreading occurs when volatility is allocated to individuals who are better able to save, borrow, or use third-party insurance. For instance, by saving during upturns (and using the saved funds to maintain consumption during downturns), an individual can smooth her consumption over time and thus mitigate the harmful effects of fiscal volatility. Borrowing during downturns (and paying off the borrowing during upturns) likewise accomplishes consumption-smoothing, thereby mitigating the harmful effects of fiscal volatility. Finally, the use of third-party insurance transfers volatility from the insured individual to other economic actors (who may reside out of state).

Empirically, wealthier taxpayers are both more able and more likely than poorer taxpayers to save during upturns, borrow during downturns, and purchase third-party insurance. It is well known that the wealthy tend to save more than the poor and thus have greater savings available to smooth consumption during downturns.\textsuperscript{172} The wealthy do not necessarily borrow more than the poor, but they have a greater ability to access capital markets if they wish to do so.\textsuperscript{173} Finally, although directly purchasing insurance against downturns is not common, the wealthy can effectively purchase insurance through the use of options, derivatives, annuities, and other financial instruments.\textsuperscript{174}

Consequently, redistributing volatility from the poor to the wealthy accomplishes both direct and indirect risk spreading. Since state tax and

\textsuperscript{170} The move here is similar to the logic typically used to justify making interpersonal utility comparisons based on the diminishing marginal utility of money. There may well be some wealthy taxpayer who derives more utility from a marginal dollar than does some poor taxpayer, but when abstracting across an entire population, it seems reasonable to conclude that wealthy taxpayers as a class will derive less utility from a marginal dollar than will poor taxpayers as a class. Similarly, wealthy taxpayers as a class should have more slack.

\textsuperscript{171} Indeed, the direct planning cost effects and the indirect risk-spreading effects are perhaps inextricably intertwined, as borrowing, saving, and the use of third-party insurance are both mechanisms for indirect risk spreading and also forms of slack.


\textsuperscript{174} The number of individuals insuring through these methods is probably small, but there is no doubt that these techniques are more available to the wealthy than to the poor.
spending programs are redistributive on the margin, fluctuating tax rates as the primary response to fiscal volatility accomplishes more risk spreading than does fluctuating spending levels.

2. Comparing Public-Spending Activities to Private-Sector Economic Activities

When comparing taxpayers to the beneficiaries of public spending programs, the focus is on differences between individual state citizens. Yet it is also possible to examine the risk-spreading effects of responses to fiscal volatility from the perspective of a representative taxpayer. Even if all state citizens were identical—or if state fiscal policy was not redistributive—fluctuating tax rates would accomplish more risk spreading than would fluctuating spending levels.

As a starting point, one might think that the principle of risk spreading would call for fiscal volatility to be allocated to public-spending programs rather than to private-sector economic activities. After all, downturns occur when the private sector is already suffering due to economic volatility. Why not allocate some of this volatility to the public sector through spending reductions and tax cuts?

Although the intuition behind this conclusion is correct, it is nonetheless misguided. Certainly, public-sector spending should not be completely shielded from the effects of volatility. Spending cuts will likely form a portion of the optimal response to volatility during downturns. However, this intuition ignores the impact that deviations in growth have on state revenues: a 1% reduction in private-sector economic activity results in considerably more than a 1% reduction in tax revenues. According to one estimate for the combined fifty states, excluding legislative changes, each 1% deviation in GDP growth below its trend reduces total state revenues by 2.5%.¹⁷⁵

The reason that tax revenues are several times more volatile than state economic activity is that the underlying tax base is not overall state economic activity. Instead, the tax bases for most of the major state-level taxes are considerably more volatile than is state economic activity.¹⁷⁶ Most dramatically, business-level income taxes are only incurred when businesses earn profits.¹⁷⁷ During an economic downturn, many businesses will show losses or only minimal profits, and thus will not pay significant business-level income taxes. The same phenomenon holds true to a lesser extent for individual income taxes, particularly for the self-employed. Deductions are likely to remain steady during downturns while gross earnings decrease, leading to a reduction in taxable income. Moreover, for states that tax capital gains, taxpayers will tend to realize more losses in their capital gains income during

¹⁷⁶. Id.
¹⁷⁷. In contrast, a gross receipts tax or a value added tax (VAT) would be due regardless of profitability.
downturns and greater returns during booms.

Even the revenues derived from state sales taxes are typically more volatile than overall economic activity, as state sales taxes tend to exempt services that are more heavily consumed during downturns, as well as often exempting other necessary items like food and medical expenses. The manufactured consumer goods that are most heavily taxed under most state sales tax systems tend to be purchased more during upturns than in downturns.

Hence, with the notable exception of property taxes, the major state tax systems are all considerably more volatile than overall state economic activity. As noted previously, state tax revenues have been estimated to be two-and-a-half times more volatile than gross state products. In states that rely heavily on income taxes and capital gains taxes, like California, this ratio is even more extreme.

Consequently, reallocating fiscal volatility more evenly across the public and private sectors should further both direct and indirect risk spreading. Direct risk spreading is achieved when volatility is spread as widely as possible across individuals or sectors of the economy. All else being equal, the direct risk-spreading principle would thus call for fiscal volatility to be allocated across the public and private sectors in proportion to the size of both sectors as a percent of gross state product. Yet without tax rate adjustments, the public sector in a typical state will be forced to absorb more than twice as much volatility as the private sector. In order to correct this imbalance, the state must adjust tax rates as the economy cycles, raising rates during downturns and lowering them during upturns.

The principle of indirect risk spreading calls for an even further reallocation of volatility away from the public sector and toward the private sector. Indirect risk spreading is furthered by allocating volatility to actors who are better able to save, borrow, insure, or efficiently reallocate volatility across subprograms. Due to the legal and political constraints on public-sector activities, private-sector economic actors are better able to engage in all of these methods for mitigating the harmful effects of volatility than are public-sector spending programs.

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179. See id. at 447–48.

180. For a more in depth discussion of the factors inherent in state level tax systems that contribute to revenue volatility exceeding of economic volatility, see Russell S. Sobel & Gary A. Wagner, Cyclical Variability in State Government Revenue: Can Tax Reform Reduce It?, 29 ST. TAX NOTES 569 (2003).


182. See Vasché & Williams, supra note 21, at 39 (estimating that California’s short-term revenue elasticity was 3.51 between fiscal years 1992 and 2004).
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To begin explaining why, legal constraints limit the ability of public-sector administrators to engage in borrowing. These constraints do not always preclude borrowing, but they often impose burdensome limitations—such as the need to seek voter approval—that are not similarly placed on private-sector managers. And, while public-sector administrators are less legally constrained when it comes to saving or insuring, the political dynamics of the budgeting process create strong disincentives to taking these steps. The budgets for public-sector programs are set politically, whereas private-sector budgets are often determined (directly or indirectly) by the market. Consequently, public-sector managers are trained to demonstrate the need for more funding in order to protect their budgets. Saving and insuring are not usually possible within the dynamics of this budgeting game.

The political budgeting process also interferes with the ability of public-sector managers to allocate the effects of volatility efficiently across subprograms. When downturns force budget cuts, public-sector managers face incentives to allocate the cuts to politically salient portions of their budgets in an attempt to protect their budgets during subsequent rounds of cuts. Often, this dynamic means that public managers allocate cuts to the budget areas in which the cuts result in more costs on the whole, rather than to the budget lines that can absorb the cuts most efficiently.

Of course, large businesses are not completely immune to politics or to the sort of budgeting games that pervasively affect public-sector spending. But there is usually better oversight within private-sector organizations, and the motivating force of market competition tempers the harmful effects of these political dynamics. Even most liberal economists generally agree that the private sector is more efficient at producing goods and services, except for public goods that would not be produced without government. The same market forces that make private-sector production more efficient than government production—and that more generally justify capitalism as a means of economic ordering—also lead the private sector to mitigate the harmful effects of economic volatility more efficiently.

As an example of how budgetary politics can exacerbate the harm from spending fluctuations, political dynamics frequently cause state social
insurance programs to bear a disproportionate share of budget cuts during downturns.\textsuperscript{189} These programs are especially poor candidates for absorbing the harmful effects of fiscal volatility. State social insurance programs are intended to mitigate the risk of economic misfortune by assisting taxpayers during periods of particular hardship. To function effectively, these programs need to spend more resources during economic downturns, when potential program recipients are especially likely to have suffered hardship. Unfortunately, state governments have historically reduced funding for social insurance programs during periods of economic adversity only to restore funding again during periods of strong economic growth.

It would be irrational to purchase an umbrella that only functions during sunny days. Depriving social insurance programs of funding during downturns and increasing funding during upturns is equally irrational. An essential purpose of these programs is to insulate against risks; introducing uncertainty to this insurance function makes the insurance considerably less valuable. When funding levels fluctuate, many potential social insurance beneficiaries with strong needs are denied assistance during downturns, while less needy recipients receive benefits during upturns.\textsuperscript{190}

Comparing public-sector spending activities to private-sector economic activities thus further reveals that tax-rate adjustments accomplish greater risk spreading than do spending fluctuations. Increasing the use of tax-rate adjustments as state economies cycle would mitigate some of the harm caused by fiscal volatility.

\textbf{C. Conclusions and Caveats}

Both when comparing taxpayers to spending beneficiaries, and when comparing private-sector economic activities to public sector spending, the result is the same. Adjusting tax rates accomplishes more risk spreading than does fluctuating government spending levels. Moreover, the normative force of these arguments is cumulative; from a baseline of allocating fiscal volatility equally to tax and spending adjustments, each argument pushes the optimum further toward the direction of larger tax-rate adjustments and smaller spending fluctuations.

Nevertheless, the optimal response to fiscal volatility is likely to include some amount of spending fluctuation. The harm from allocating risk to any individual actor increases on the margin. The arguments here support allocating the \textit{majority} of volatility to tax-rate adjustments. That said, at some point, continually increasing the magnitude of tax-rate adjustments will cause more harm than would maintaining some degree of spending fluctuations. This

\textsuperscript{189} The analysis here partially draws on the writings of David Super, \textit{supra} note 48, at 2630. Note that although the market could theoretically fund some of these programs, moral hazard problems may make governments more efficient providers of these programs.

\textsuperscript{190} See Super, \textit{supra} note 48, at 2611–14.
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Article makes no attempt to quantify its risk-spreading arguments. Instead, it merely argues that tax-rate adjustments should form the primary response to fiscal volatility. The question of whether “primary” means 60% of coping responses or 90% is left for future research.

Moreover, both the optimal amount of tax-rate adjustments and the choice of which taxes to adjust depend on structural features of state economies. The degree to which taxpayers are likely to relocate across state lines or play timing games across tax years in response to tax hikes is an important factor in determining the desirability of tax-rate adjustments with respect to these groups. In deciding which taxes to adjust, states will often face a dilemma in which the taxes that most affect upper-income taxpayers (such as progressive income taxes or capital gains taxes) are also the most likely to be avoided through relocation or timing games. Yet many of the advantages of selecting tax-rate adjustments over spending fluctuations derive from progressivity. This Part has argued that—as compared to fluctuating government spending—even adjusting the rates of a regressive tax like the sales tax is beneficial to lower-income taxpayers. But adjusting the rates of more progressive tax instruments achieves even greater risk-spreading advantages.

One approach to balancing these competing considerations would be to create a new statewide property tax that could be adjusted to have positive tax rates during downturns (so as to offset the reduced revenues being generated by other state tax instruments) while providing a tax refund during upturns. The new property tax could include circuit breakers in order to increase its progressivity. The desirability of creating a new statewide property tax, as compared to other methods for enacting tax-rate adjustments, is a question largely left for future research. For now, it suffices to reiterate that not all tax-rate adjustments accomplish risk spreading. This Article has only examined the tradeoffs between allocating volatility to broad-based tax-rate adjustments, as compared to across-the-board spending adjustments. The questions of how best to allocate tax rate adjustments amongst the various state tax instruments, and how best to allocate spending adjustments amongst state spending programs, are likewise left for future research.


192. Some further discussion of this issue can be found in Part III.B.

193. Another possible approach for coping with fiscal volatility is to broaden tax bases during downturns while narrowing them during upturns. This approach is similar to adjusting tax rates in that it results in tax burdens fluctuating across the economic cycle, but it accomplishes this through a different mechanism. However, broadening and narrowing a tax base will generally be suboptimal from a risk-spreading perspective. Changing the elements of a tax base typically affects a much narrower group of taxpayers than does adjusting the rates of the tax instrument, thus causing the effects of volatility to be more concentrated. Additionally, adjusting the elements of a tax base is likely to engender more undesirable game playing on the part of taxpayers than would adjusting tax rates.
III
INSTITUTIONAL-DESIGN POLICY

Part II analyzed how states should respond to the fiscal volatility created by economic cycles interacting with their balanced-budget constraints. In contrast to the current trend of primarily fluctuating government expenditures, Part II argued that states should instead rely more on adjusting the rates of their broad-based taxes. States should raise their tax rates during economic downturns and lower their tax rates during periods of economic growth.

Part III argues that states could make tax-rate adjustments more common and expenditure fluctuations rarer by changing how the terms “tax cuts” and “tax hikes” are defined by the states’ legislative processes. Under the states’ current institutional frameworks, legislated changes to state tax rates become presumptive changes to steady-state policies. Whereas most government expenditures need to be reauthorized annually through acts of the legislature, tax rates remain in effect once passed and are automatically reauthorized until explicitly changed by some future act of legislation.194

Most voters and political actors care more about their steady-state policy preferences than about how volatility is allocated around the steady state. Even if they could be persuaded by the arguments in Part II, conservatives would be unlikely to accept tax hikes during downturns and liberals would be unlikely to approve of tax cuts during upturns, unless they had guarantees that these policy changes would be reversed after the end of the economic circumstances that triggered them. Moreover, since the governing coalition in control during a downturn might have lost power by the next upturn, governing coalitions have even further reason to care more about their impact on steady-state policies than about optimal responses to volatility. A governing coalition could not credibly call a tax hike made during a downturn a response to volatility that will be undone during the next upturn, as the subsequent governing coalition might not play along. Hence, to improve how states cope with fiscal volatility, we need a means for separating the policy question of choosing what to adjust as a response to fiscal volatility from the policy question of setting the steady-state levels of taxes and spending.

We tend to think of the terms “tax cuts” and “tax hikes” as having set meanings. Although there are circumstances in which politicians argue about whether or not a policy change should be labeled as a “tax cut” or a “tax hike,” there is generally widespread agreement that most increases in state tax rates should be called “tax hikes” while most decreases in these rates should be called “tax cuts.” Yet the very notion of legislated changes—as embodied in

194. Tax laws function like entitlement spending in that they remain in effect until explicitly altered. Discretionary general account spending must be rebudgeted annually.
195. This can be inferred from how rarely the political debate focuses on fiscal volatility issues as compared to questions related to the steady-state levels for taxes and spending.
196. The exceptions to this maxim only serve to support the general rule. For instance,
terms like “tax cuts” and “tax hikes,” or even “spending cuts” and “spending hikes”—requires a notion of a default policy outcome that would have been enacted in the absence of the legislated change. One can only measure changes from the policy status quo by referencing a baseline for what constitutes the status quo. Since balanced-budget constraints make it impossible to hold the entirety of state budgetary policies constant as the economy cycles, there can be no ontological definitions for labels like “tax cuts” and “tax hikes.”

One dictionary defines a tax cut as “a reduction in the amount of taxes taken by the government.” But the amount of revenue the government receives from taxes is constantly changing. Sometimes these changes occur due to legislative fiddling with tax-rate structures or with the rules for calculating tax bases. At other times the government increases or decreases its revenue intake due to evolving economic conditions or to changing responses to tax provisions. Nearly any government program that affects the economy can

Democrats and Republicans dispute whether allowing the Bush tax cuts to expire should be viewed as “raising taxes.” The frame here is contestable because the parties can argue about whether the relevant baseline includes extension of the temporary tax cuts. But were the Democrats to propose raising tax rates further—beyond the pre-Bush levels—there would be no doubt that this would be considered a “tax hike.” Whether overall revenues are increasing or declining due to economic circumstances is not currently viewed as a relevant consideration in whether a policy change is called a “tax cut” or a “tax hike.” See infra notes 203-205 and accompanying text.

197. One might argue that general account spending does not have baselines in the same sense as does tax legislation, as general account spending must be reauthorized each year. But this argument is not fully persuasive as most general account spending is reauthorized without full review and changes from the previous year’s levels of spending are usually viewed as “spending cuts” or “spending hikes.” Zero-base budgeting is seldom implemented in practice.

198. The difference between state general account spending and federal discretionary spending is that the federal government can incur deficits. Hence, at the federal level, revenue volatility (the default response to economic cycles under a tax-rates baseline) causes the deficit to automatically grow and shrink unless the legislature proactively adjusts tax or spending policies. In contrast, at the state level, there is no actual default fiscal policy. The tax-rates baseline means that any legislated change to tax rates is coded as a “tax cut” or “tax hike,” but any legislated change to spending will similarly be coded as a “spending cut” or a “spending hike.” See supra note 194. Revenue volatility forces states to adjust either their tax or spending policies as their economies cycle, but the states must actively decide which specific policies to adjust.

This Article focuses on the definition of “tax cuts” and “tax hikes” because these terms are more salient within the current political environment—as reflected by the increasing rarity of “tax hikes.” The motivating idea is that, as voters appear to increasingly be making decisions based on whether politicians are seen as voting for “tax cuts” or “tax hikes,” we should strive to make the content of these terms reflect what voters actually care about. Or, alternatively, we should strive to eliminate any negative consequences of the increased salience of these terms that does not result from the reasons voters care about the terms.

Voters presumably care about these terms based on their preferences for steady-state policy, not based on preferences for how fiscal volatility should be allocated. Therefore, we should define these terms so that the terms convey the information voters seek about legislated changes to steady-state fiscal policy (the size-of-government decision), without negatively affecting how states respond to cyclical economic fluctuations (the fiscal volatility decision).
alter the amount of revenue collected through taxes. But if we labeled any change in government policy that might alter the amount of revenue generated though taxation as a "tax cut" or "tax hike," these terms would become meaningless.

As such, we can only determine the appropriate baselines for terms like "tax cuts" and "tax hikes" by making meta-decisions about what aspects of our budgetary policy we would like to hold constant as a default. This institutional-design-level choice of baselines determines which policy outcomes become presumptive responses to fiscal volatility, and which become presumptive changes to steady-state policies.201

This Part argues that states should adjust their tax baselines—the default tax policies that are enacted in the absence of explicit legislative change—in order to make tax rate adjustments more common and expenditure fluctuations rarer. This Part first explains why the choice of baselines matters, reviewing literature from positive political theory and from behavioral public finance. Second, this Part outlines alternative baselines that might be used in place of tax rates and briefly discusses how states might implement these alternative baselines.

A. Why the Choice of Baselines Matters

Although it is almost tautological to say that we could not use terms like "tax cuts" or "tax hikes" without a baseline for defining those terms, this alone is not enough to conclude that the choice of baselines actually matters. For instance, we might imagine legislatures determining their preferred levels of taxation and spending each year without reference to prior-year policy. If legislatures determined their tax and spending policies anew each year from scratch—without influence by any policy status quo—then the choice of baselines would not affect policy outcomes. Instead of focusing on policy changes, such as tax cuts and tax hikes, the political debate would be dominated by the discussion of desired outcomes.

Analysts Office analyze the effects of a number of economic variables on the amount of tax revenue collected by the State, including trends in consumer and business spending, housing, employment, profits, and income distributions. See Vasché and Williams, supra note 21, at 40.

201. At this point, it may be helpful to clarify the difference between adopting a new tax baseline and adopting a tax expenditure limit. Numerous states have adopted tax expenditure limits in order to prevent legislatures from raising taxes or to limit the circumstances under which legislatures can raise taxes. An example of a tax expenditure limit is a rule requiring that a supermajority of a legislature vote to approve a tax hike. Whereas tax expenditure limits are designed to bias the evolution of steady-state policies (usually, against raising taxes and spending), the choice of baselines is only meant to influence which aspects of steady-state policies fluctuate in response to fiscal volatility. Adopting a new baseline should not prevent legislatures from adjusting steady-state policies as they desire. Instead, adopting a new baseline only alters the mechanism through which legislatures change steady-state policies.
However, "[a] core feature of humans is that we are highly attuned to changes in our circumstances, not merely the absolute levels." Any examination of campaign advertisements or political newspaper stories will quickly reveal that political actors behave as though labels matter. Rarely do politicians try to convince voters about the proper size of taxation or spending as a percent of GDP. Instead, politicians accuse their opponents of wanting to "raise your taxes" and the media dutifully reports the number of times a politician has voted for "tax cuts" or "tax hikes." It is no accident that the No New Taxes Pledge commits its signers to "oppose any and all efforts to increase . . . tax rates," rather than committing them to attempt to bring the overall level of taxation to some targeted size.

Alternatively, a skeptic might think that voters care only about their individual tax rates, and will consider any changes to these tax rates to be "tax cuts" or "tax hikes." Yet voters repeatedly express strong opinions about tax policy changes that do not affect them directly—as evidenced by the political salience of the debate over the estate tax (or "death tax"), despite this tax affecting only a small portion of the voting populace. Moreover, from the perspective of policy outcomes, what matters are which tax changes voters blame on individual politicians and legislators. Voters may dislike their tax rates going up, and may view this as a "tax hike." But when tax rates go up without any sitting legislator voting in favor of the tax-rate hike, voter anger may remain unfocused and may thus have minimal political impact.

Consider the debate at the federal level about whether the opponents of making the Bush tax cuts permanent are sponsoring tax hikes or simply opposing new tax cuts. The answer to this question depends on whether our baseline is current law with the Bush tax cuts extended or current law without the tax cuts extended. Notably, the appropriate label is controversial, with both sides viewing the choice of labels as significant. Also notable is that while many Democrats feel comfortable advocating for the Bush tax cuts to expire, far fewer Democrats are openly calling for taxes to be raised above the pre-Bush levels.

A similar dynamic became a major point of controversy during the 2004 presidential election. Democrats and Republicans proposed different frames for understanding Kerry's tax plan. The Kerry campaign claimed it wanted to

203. Gale & Kelly, supra note 35, at 198.
repeal some of the tax cuts previously enacted by the Bush administration, while the Bush campaign claimed that Kerry wanted to raise taxes. Both campaigns were referring to the same substantive policy proposals, only their choice of labels differed, with each party appearing to believe that its preferred label was politically advantageous for its side. Again, it is worth noting that Kerry called only for repealing previously enacted tax cuts. If labels and baselines were irrelevant, the Kerry campaign would not have needed to distinguish between repealing the Bush tax cuts and simply raising taxes. This discussion of the Bush tax cuts shows that political actors care about the baselines used to measure tax policy, and that these baselines are at least sometimes contestable. As Daniel Shaviro argues, "labels can matter even if they are arbitrary and potentially misleading... politicians fight about labeling a particular provision as a tax increase or a spending cut, even if substantively the classification makes no difference."

For another example, although Regan’s 1981 tax package slashed the marginal tax rates and introduced new tax incentives for businesses and real estate, many astute commentators have argued that the legislation’s "most significant enduring feature was the elimination of rate bracket creep through inflation adjustments." According to Michael Graetz, "These inflation adjustments eliminated the sizeable automatic income tax increases that had been produced even at relatively low levels of inflation. The lasting revenue impact of this change is dramatic—far greater than is generally known."

By indexing the tax code for inflation, the 1981 Tax Act changed the baseline for determining tax cuts and tax hikes. Prior to 1981, the default outcome in the absence of legislative action brought additional revenues as inflation moved taxpayers to higher brackets. After 1981, these "automatic tax increases" were abolished, and Congress was no longer able to obtain the same yearly revenue increases without explicitly voting to raise taxes. The adoption of this new tax baseline through inflation indexing dramatically

206. Shaviro, supra note 123, at 71.
207. Michael J. Graetz, Tax Policy at the Beginning of the Clinton Administration, 10 Yale J. on Reg. 561, 563 (1993).
208. Id.
209. Before indexing, inflation caused taxpayers’ income to be taxed at increasingly higher rates over time as greater portions of their income moved into higher tax brackets. This effect was so pronounced in the late 1970s that the "change from 1976 to 1981 represented an increase of 23% in the real level of the income-tax burden." Edward J. McCaffery, Cognitive Theory and Tax, 41 UCLA L. Rev. 1861, 1896–97 (1994). By any holistic measure, the level of taxation increased during this period. Yet these changes were not generally viewed as government-sponsored tax hikes. "Indeed, the two major Carter era tax bills, the 1977 Tax Reduction and Simplification Act and the 1978 Revenue Act, were each billed, projected, and expected to be tax reductions." Id. at 1897 (emphasis in original). With nominal tax rates functioning as the tax baseline, the Carter administration was credited with passing tax cuts even though the real level of taxation was increasing. The absence of indexing allowed the government’s revenue intake to rise without Congress or the Carter administration taking significant political heat for passing tax hikes.
altered the dynamics of the federal tax policy debate.\textsuperscript{210}

As these examples demonstrate, baselines and labels matter in politics and political entrepreneurs are sometimes able to change the previously dominant labels. The advocates of inflation indexing argued for decades that the pre-1981 baseline for the federal income tax was harmful. By 1981, they had finally convinced enough important political actors to have their preferred baselines partially enacted into the federal legislative process.\textsuperscript{211}

Looking outside the tax context for a final example, the fact that payouts from the federal Social Security program are indexed to growth in wages partially accounts for the rapid increase in the size of the program as a percent of GDP. When the Bush Administration called for Social Security payouts to be indexed to inflation instead, there was uproar over this attempt at “benefit cuts.” In the words of Daniel Shaviro:

The choice of a baseline is inevitably arbitrary, or at least subject to differing interpretations. By having the rules they do, however, Social Security and Medicare effectively end any such dispute and dictate the choice of a relatively generous baseline. The Bush Administration learned this the hard way during the 2005 Social Security debate, when it found few takers for its argument that eliminating wage indexing for high wage earners, and henceforth pegging their benefits just to the inflation rate, was not really a benefit cut, as it would keep current benefits constant in real terms.\textsuperscript{212}

If Congress ignored baselines and re-determined the appropriate size of Social Security benefits each year from scratch, or if voters only paid attention to changes in the actual size of their Social Security payments, then the Bush Administration’s proposal would have made no difference. The widespread controversy that surrounded the proposal thus strongly suggests that political analysts believe that the choice of baselines can affect policy outcomes. To again quote Shaviro, structural fiscal language—like baselines—functions as “formal rules of the game that participants can manipulate but not openly flout. . . . [Structural fiscal language] tilts and constrains real policy choices, and induces political actors to befuddle themselves even as they labor to befuddle constituencies whose support they need.”\textsuperscript{213}


\textsuperscript{211} The advocates of inflation indexing were only partially successful; many important elements of the federal income tax remain unindexed—most notably, the alternative minimum tax. For further discussion, see Richard J. Kovach, Technical and Policy Standards for Inflation Adjustments Under the Internal Revenue Code, 33 OKLA. CITY U. L. REV. 603 (2008); James C. Young, Inflation Adjustments Affecting Individual Taxpayers in 2003: Analysis and Commentary, 96 TAX NOTES 1895 (2002).

\textsuperscript{212} See Shaviro, supra note 123, at 159.

\textsuperscript{213} Id. at 11.
As the above examples indicate, baselines in the tax and spending contexts are already the subject of considerable debate. This Part contributes to the literature on tax baselines by pointing out another arbitrary feature of the baselines we currently use for most state and federal taxes. Currently, the default legislative outcome is for tax rates to remain constant as the economy cycles, even as revenues rise during upturns and fall during downturns. There is essentially no literature discussing this choice of baseline. Yet this baseline is partially responsible for states preferring spending fluctuations over tax-rate adjustments as their primary means of coping with fiscal volatility.

The remainder of this Section briefly discusses two theoretical literatures that provide explanations for why the choice of baselines affects the outcomes reached by the ordinary political process.

1. Positive Political Theory

The first explanation for why the choice of baselines matters comes from positive political theory. Our democratic political system—both at the state and federal levels—is characterized by numerous veto points. Bills do not become laws unless passed by both legislative chambers (in the majority of states with bicameral legislatures). Then, if the legislative chambers pass the bill with less than a supermajority, the bill is exposed to the possibility of a gubernatorial veto. Moreover, in most state legislatures, there are numerous additional actors, such as committee chairpersons, who can block the adoption of new legislation.

A naïve view of democracy might assume that median voters' preferences are always enacted into law. Yet individual legislators and the governor are each elected by a distinct subset of a state's voters. Predictably, political actors disagree with one another about which policies should be enacted. Legislative proposals thus typically require the support of more than a mere 51% majority to become law. A proposal will not become law unless either every political actor with the ability to block new legislation supports it, or other political actors give sufficient support to override attempts to block the proposal.


215. See, e.g., Alesina, supra note 58, at 12 (“The academic literature has pointed out that the fragmentation of a political system is an obstacle to the implementation of the appropriate fiscal decisions, particularly when various shocks require a swift fiscal response. In the most general sense, political fragmentation is a situation in which many political groups have a voice in fiscal decisions, and many have veto power. The point is not that fragmentation necessarily creates budget deficits, but that fragmentation creates obstacles to policy changes, because it becomes more difficult to reach agreements about corrective fiscal measures.”).
Agenda-setting powers exacerbate this effect. Legislatures have neither the time nor the resources to deliberate fully over every possible legislative change. Even a new proposal that the majority and all veto players support might not become law if time runs out on the legislative calendar.

With regard to tax baselines, all of these effects are magnified in the many states with tax-expenditure limits making it more difficult to raise taxes. For instance, in states that require supermajority votes to raise taxes, the difference between tax changes that need to be specifically voted on and tax changes that result from economic growth are particularly pronounced.

Under a tax-rates baseline, the default policy outcome is for revenues to decline during downturns and to increase during upturns. If the majority wishes to depart from this default outcome, it needs to get its proposed change through all relevant veto points. Even if only a minority of a legislature is strongly opposed to tax hikes during downturns, this minority may still have its way, particularly if there is a supermajority requirement for raising taxes or the minority has the support of an important veto player.

In contrast, under a revenue-targets baseline, the default outcome is for tax rates to rise during downturns and fall during upturns. Again, if the majority does not like this default outcome, any proposed change must pass through all the relevant veto points. Ultimately, a sufficiently strong majority in favor of overturning a default outcome will succeed in enacting its preferences into law. Nevertheless, baselines matter because there is often a range of policy changes that would have the support of the majority of voters but are not supported by political actors wielding veto powers. When looking at tax policy specifically, the choice of baselines determines which veto players’ preferences become law. The veto players’ preferences that are closest to the default option that the baseline creates should determine the eventual policy outcome.

Baselines matter because any veto player who prefers the default policy outcome to a proposed change can defeat the proposed change. The majority must refashion its policy proposal so that all veto coalitions prefer the proposal to the default option. Otherwise, the proposal will not succeed. By switching the default option from holding tax rates constant to holding revenues constant, a revenue-targets baseline should thus make tax-rate fluctuations more common and expenditure fluctuations rarer.

2. Behavioral Public Finance

The second body of literature that explains why baselines matter is behavioral public finance, also known as political psychology. Hundreds of

216. See Ellen Moule & Nicholas Weller, The Spread of Tax Revolt, the Diffusion of State Tax and Expenditure Limits (unpublished manuscript, on file with author); James M. Poterba, State Responses to Fiscal Crises: The Effects of Budgetary Institutions and Politics, 102 J. Pol. Econ. 799 (1994).

217. See Behavioral Public Finance (Edward J. McCaffery & Joel Slemrod eds., 2006).
experiments and field studies have demonstrated that individuals exhibit what is known as either “loss aversion,” the “endowment effect,” or the “status-quo bias.” These three labels refer to related phenomena—that individuals dislike losses more than they like gains, or that individual preferences are biased toward whatever they view as the status quo.

Many theorists have argued that these phenomena apply to fiscal policy changes, such that “tax cuts are not nearly as ‘good,’ from the standpoint of the endowment effect and status quo bias, as tax increases are ‘bad.’ So a high-tax baseline for defining changes can increase people’s tax tolerance.” Most notably, Ed McCaffery and Jon Baron have confirmed that the fiscal policy preferences of experimental subjects are biased in the direction of whatever outcome they perceive to be the status quo. Voters are far more likely to punish a politician for raising taxes than for failing to lower taxes. Of course, just because a change of baselines alters the default legislative outcome does not necessarily mean that it also alters voters’ conceptions of the status quo. Even under a revenue-targets baseline, voters might still notice when their tax rates go up.

Yet voters do not blame all policy changes they dislike on elected politicians. When the Federal Reserve hikes interest rates, even voters who dislike high interest rates seldom blame Congress for allowing it to happen, despite the fact that Congress could override the Federal Reserve’s authorizing statute at any time. Similarly, under a revenue-targets baseline, even voters who notice their tax rates going up during downturns might come to view these changes as a natural response to evolving economic conditions rather than as tax hikes sponsored by the state legislature. Or, they might blame the changes on the administrative board enacting the new rates. Once taxpayers become accustomed to seeing tax rates fluctuate annually, even in the absence of any new tax legislation, they should eventually begin to understand the new baseline. In any case, it is difficult to hold politicians accountable for changes they do not propose. Even voters who want to blame politicians for allowing tax rates to go up may not know which politicians to blame.

Under a revenue-targets baseline, tax rates rise during downturns without any politician needing to vote specifically for a tax increase. There is reason to think voters will be less averse to these automatic tax-rate increases than to tax-rate increases that are specifically voted on by the legislature—tax-rate


221. See ALAN S. BLINDER, CENTRAL BANKING IN THEORY AND PRACTICE 55 (1999) (claiming that Congress’s need to pass a law to overturn the Federal Reserve’s interest rate decisions makes these “decisions, for all practical purposes, immune from reversal”).
increases that are clearly "tax hikes." Hence, adopting a revenue-targets baseline should again make tax fluctuations more common and expenditure fluctuations rarer.

Empirical studies of the "flypaper effect" buttress these theoretical explanations for why baselines matter. The flypaper effect refers to the hypothesis that additional money "sticks where it lands," such that, for instance, federal government grants to state governments result in more state spending increases than do equivalently sized federal payouts to the state's citizens. A particularly relevant paper in this literature by Helen Ladd looks at the changes to state tax systems that occurred due to the 1986 federal tax reform. When the federal government broadened its income tax base, this automatically broadened the income tax bases for those states that tied their income-tax-base calculations to the federal rules, thus creating "windfall" tax revenues for the states' governments. As Ladd explains, if the choice of baselines did not matter, "state officials would offset the windfalls by reducing tax rates or restructuring the state revenue system to maintain spending and state tax burdens in line with voter preferences." Hence, Ladd's finding "of a flypaper effect for the large . . . windfalls means that state actions do not fully offset the unintended windfall gains for state governments associated with large-scale federal tax reform." In other words, baselines matter because state governments do not fully counteract default outcomes.

The empirical evidence thus corresponds with this Article's theoretical prediction—baselines matter. Although legislatures do not simply follow default policy outcomes, the choice of a default policy outcome exerts a powerful pull on fiscal policy. By switching from tax-rates baselines to revenue-targets baselines, states could increase their use of tax-rate adjustments and decrease their reliance on spending fluctuations.

B. Alternatives to the Tax-Rates Baseline

There are at least three models for which aspects of a tax system could be held constant throughout economic cycles: constant tax rates, constant revenue targets, and constant spending needs.


224. Id. at 82.

225. Id. at 83.

226. Id. at 101.

227. More generally, a sizeable empirical literature has concluded that fiscal institutions "matter." See, e.g., James M. Poterba, Do Budget Rules Work? 0 (Nat'l Bureau of Econ. Research, Working Paper No. 5550, April 1996) ("Several distinct strands of empirical evidence, from the U.S. federal experience with anti-deficit rules, from U.S. state experience with balanced budget rules, and from international comparisons of budget outcomes in nations with different fiscal institutions, suggest that fiscal institutions do matter.").
In the "tax rates" baseline on the left side of the spectrum above, tax rates are held constant in the absence of legislated changes. Consequently, decreased revenues becomes the default response to economic downturns, and increased revenues becomes the default response to upturns. Any deviation from these default responses requires legislative action and will typically be labeled as a "tax hike" or a "tax cut." The left side of the spectrum depicts the general rule governing most state and federal tax systems, with the exception of the property tax systems in some states. In the "revenue-targets" baseline in the middle of the spectrum—which roughly corresponds with the property tax systems of twenty-two states—the amount of revenue raised is held constant as the economy cycles, with tax rates automatically adjusted so as to maintain the revenue targets. Finally, in the "spending needs" baseline on the right side of the spectrum, tax rates are adjusted to maintain the spending goals of government programs. For instance, some federal grants to states are based on participation levels for the grant-funded spending programs—which often tend to increase during economic downturns and decrease during upturns, particularly for programs that provide poverty assistance or that fulfill a social insurance function. A baseline tied to spending needs would automatically adjust the tax rates in order to maintain the same funding per program participant, or per other metric for spending needs.

This Section will proceed by first discussing how some states have moved from tax-rates baselines to revenue-targets baselines for their local property taxes. It will then discuss how alternative baselines might be implemented for statewide taxes such as state sales and income tax systems.


Since no government has ever implemented a baseline other than tax rates for a sales or income tax, the best way to explain how an alternative baseline might work for these taxes is to start by looking at the property tax systems of the twenty-two states that have effectively adopted variations of revenue-target baselines. These states vary greatly in how they have implemented their alternative baselines, and local property taxes are sufficiently dissimilar from statewide taxes that one should not put too much stake in these examples. Nevertheless, these revenue-target-like property tax systems are the best real-
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The use of revenue-target-like baselines for property taxes began in the 1960s as part of a “Truth-in-Taxation” movement. ²²⁸ The advocates of these alternative property tax-like baselines were concerned that local governments had been “automatically” receiving extra revenues as their local property values increased, without local governments ever needing to explicitly raise taxes. ²²⁹ The advocates of these measures were the same conservative groups that promoted tax-expenditure limits in other states. ²³⁰ These groups viewed themselves as calling for a softer form of tax-expenditure limit. ²³¹ Yet the logic behind their measures and the means in which they were implemented had the effect of changing the state property tax systems from using tax-rate baselines to using variations on revenue-target baselines. According to Robert Bland and Phanit Laosirirat,

Truth in taxation, also known as full disclosure, was developed by the U.S. Advisory Commission on Intergovernmental Relations (ACIR) in 1962 as a method to reduce revenue windfalls in the wake of an en masse reappraisal of property. It seeks to make local lawmakers more accountable for tax increases by focusing taxpayers’ attention on the rate-setting process and not only on their property’s reappraised value. This is usually achieved by first informing citizens of the constant yield rate (CYR), the tax rate that will produce the same amount of revenue as last year when applied to this year’s tax base. Then citizens must be notified of a public hearing where they can question local lawmakers on why a tax rate greater than the CYR should be adopted. Unlike other tax limitation measures that impose statewide restrictions on rates or levies, truth in taxation preserves local governments’ discretion to set rates that meet local expenditure preferences while giving taxpayers an opportunity to scrutinize proposed [tax] increases. ²³²

In other words, the purpose of the Truth-in-Taxation measures is to change the default policy response created by rising property values from holding tax rates constant while revenues go up, to holding revenues constant while tax rates go down. Tax hikes are redefined as increases to “constant yield rates”—the rates that, when applied to the new (more valuable) tax base, would generate the same revenue as in the previous year. Effectively, tax hikes are defined as increases in local government revenues, rather than as increases in the actual tax rates applied to property values.

²²⁹. See id.
²³⁰. See id.
²³¹. See id.
²³². Id. at 45–46.
For an example of how these measures are given statutory authority, consider the following language in the Texas State Constitution:

Subject to any exceptions prescribed by general law, the total amount of property taxes imposed by a political subdivision in any year may not exceed the total amount of property taxes imposed by that subdivision in the preceding year unless the governing body of the subdivision gives notice of its intent to consider an increase in taxes and holds a public hearing on the proposed increase before it increases those total taxes.233

Again, the Texas Constitution defines an "increase in taxes" in reference to the "total amount of property taxes" rather than in reference to the tax rates previously applied to the property tax base. Here the institutional mechanism for raising taxes requires the local government to give notice of its intent to "increase taxes" and to hold a public hearing. This requirement applies when the local government seeks to increase its property tax revenues from those received in the prior year, not when the local government seeks to change its tax rates.

The twenty-two states that have adopted these revenue-target-like baselines for their property taxes differ in whether and how they index the baseline.234 Indexing is necessary because what it means for revenues to remain "constant" is not entirely straightforward. States could hold their baselines constant in real-dollar terms. Or states might index their baselines for inflation, thus holding revenues constant in nominal dollars. As another alternative, states could index their baselines for GDP growth, thus holding revenues constant as a percent of GDP. States might even choose to index their baselines to grow at a constant annual rate. How to index a baseline is an important question of institutional design; however, there are no theoretically correct answers to this question.

Like the indexing decision, the enforcement mechanisms for these baselines differ among the states.235 States could require only that the government publicize any "tax increases," as defined by the revenue-targets baseline, in local newspapers. Or states might allow taxpayers to sue in district courts if they believe the local government administrators have not calculated and published any "tax hikes" as defined by the new baselines in the manner the statute demands. States could even require local governments to obtain voter approval for any increase in the revenue targets, through ballot measures, or allow petitions for citizen initiatives to rollback any such increases.

235. Id.
Regardless, all of these measures have the effect of altering the baseline for defining what constitutes a tax cut or a tax hike. All of the measures switch the default policy response from increases in property tax values (the response that occurs if the local governments do not take the required steps for passing a "tax hike") to one where revenues remain constant while tax rates are lowered.

Unfortunately, the local property tax context is too dissimilar from the statewide sales and income tax context for these measures to provide a concrete guide for implementing a revenue-target baseline at the state level. There are at least three major differences between the local property tax context and statewide tax contexts that limit the value of these examples. First, government agents determine the value of local property tax bases through property appraisals. Second, property values have tended to increase over time, whereas sales and income tax bases oscillate as the economy cycles. Third, local government tax lawmaking relies on different institutions and procedures than does state-level tax lawmaking.

Looking first at the issue of property appraisals, whereas the tax bases of sales and income taxes fluctuate with economic cycles—as consumers purchase more and less goods and as incomes go up and down—property tax bases change in value partially due to the actions of government property appraisers. In contrast to state sales and income taxes, as Cornia and Walters explain:

[N]othing in property tax practice and administration inherently identifies and adjusts for changes in market value [changes in the tax base]. To appraise or reappraise a property, assessors must act overtly and estimate the sales price of each property as of the legal lien date. The need to proactively establish the economic value of the base makes the property tax different from other taxes where the value of the base is established through observable economic transactions (e.g., sales price of goods or annual income). 236

Because property tax bases change in value partially due to the action of government agents, it might be easier to reframe "tax cuts" and "tax hikes" for property taxes than for sales or income taxes. Hence, the mere fact that voters appear to accept the operation of revenue-target baselines for local property taxes, in and of itself, does not imply that voters would similarly accept these baselines for statewide sales and income taxes.

The second relevant difference between local property taxes and state sales and income taxes is that property values generally increase over time while sales and income tax bases fluctuate far more wildly. As such, adopting a revenue-target baseline for property taxes can be sold as preventing "automatic tax hikes" due to increasing property values. 237 Although the recent financial


237. The advocates of the truth-in-taxation property tax measures viewed themselves as promoting a softer version of a tax-expenditure limit with the purpose of reigning in the growth of
crisis has seen a widespread decline in housing values, this development is still too new and historically unique to have produced any significant calls for reform.\textsuperscript{238}

As a final difference, tax lawmaking relies on a very different set of institutions and procedures at the local level than at the state level. While, even a cursory discussion of these differences is beyond the scope of this Article, any attempt to draw inferences from local governments' experiences with these truth-in-taxation systems should be qualified with an understanding of the differences between tax lawmaking at these two levels of governance.

2. Implementing an Alternative Baseline for State Level Taxes

The local property tax context is sufficiently different from the context surrounding statewide taxes that truth-in-taxation property tax measures cannot provide clear guidance for implementing an alternative tax baseline at the state level. Still, the successful implementation of these local property tax measures is at least encouraging for this Article's project. At a minimum, these measures indicate that analysts and policymakers appear to believe that baselines matter for at least some forms of taxation and that it is sometimes possible to alter these baselines.

Just as truth-in-taxation local property tax systems have been implemented quite differently across the various states that have adopted these measures, there are numerous possibilities for implementing revenue-target baselines for state-level taxes. Perhaps the most straightforward method of implementation would be to have an administrative agency adjust pre-designated tax rates as the economy cycles. This could work in a similar fashion to how the federal government and some states administratively adjust their income tax brackets to account for inflation. As with these inflation-adjustment systems, legislatures could always adjust steady-state brackets or rates afterwards in order to generate any outcome desired. But in the absence of specific legislative action, the administrative body could adjust tax rates so as to keep revenues constant as the economy cycles.

Of course, the authorizing statutes would have to specify what it means to hold revenues constant. As in the local property tax context, the revenue-target baselines could be indexed for inflation, for GDP growth, or to a wide variety of other possible indexing possibilities (including not indexing at all). The

\textsuperscript{238} At the time of this writing, the truth-in-taxation property tax systems remain intact, and to this author's knowledge there have not yet been any significant political moves to abolish them.
authorizing statues would also have to specify which taxes the administrative agency is to adjust as the economy cycles. The agency might adjust all statewide taxes equally to keep total general account revenues constant, or it could adjust a specific subset of statewide taxes. Any subset of state taxes could be adjusted by enough to keep total state revenues constant.\footnote{Note that if a progressive-rate income tax (as opposed to a flat-rate income tax) is to be adjusted, the authorizing statute must specify which rates are to be adjusted as the economy cycles. As with indexing and other design variables, any answer to this question must be somewhat arbitrary. There is no theoretically "correct" method for adjusting the rates of a progressive income tax. One possible approach would be to attempt to adjust the rates so as to make the tax adjustments distributionally neutral. But this is not the only possibility, and a normative argument can be made in favor of adjusting the rates so that high-income taxpayers bear more of the tax burden during downturns and less during upturns. See supra notes 168–73 and accompanying text.} For example, an authorizing statute could create a new statewide property tax with a steady-state rate of zero, charging an administrative agency to oscillate the new tax rate as the economy cycles to impose a tax liability during downturns and to give a credit against existing taxes during upturns. During periods of growth, this tax could be gradually reduced (or made into a gradually larger credit) to counteract the additional revenues generated by other state taxes, with the opposite occurring during downturns.

One obvious concern about having administrative officials adjust tax rates in this fashion is that this might delegate too much authority to the administrative officials. Yet state administrative officials (or legislative staffs in some states) already enjoy most of the discretionary powers that a delegation of this sort would entail.

With tax rates set as the baseline for statewide taxes, states require estimates for the revenues that these taxes will generate. These estimates are crucial due to state balanced-budget requirements, as the estimates determine what levels of spending are permissible. If the administrative or legislative staffs charged with making revenue estimates report that less revenue is available, legislatures must either cut spending or raise taxes.

On the other hand, if states adopted revenue targets as their baselines for state taxes in place of tax rates, they would need estimates for the tax rates required to generate the revenue targets. This form of estimating would replace the current need to estimate revenues based on legislatively set tax rates. Under either system, calculations made by administrative officials significantly impact fiscal policy outcomes. Hence, the distinctive feature of this Article's proposal is not that it relies on estimates, or that forecasting officials have substantial control over fiscal policy, but rather that revenue targets replace tax rates as the independent variable in the estimating equation.\footnote{We currently label this forecasting as the revenue estimating process because we use tax rates as our baseline. With revenue targets as the baseline, the process would be labeled as tax-rate estimating. Under either system, calculations made by administrative officials significantly impact fiscal policy outcomes.}
Still, projecting revenue from the starting point of tax rates might be considered more straightforward than projecting tax rates from the starting point of revenue targets. State income taxes are only collected annually, and even sales tax rates must be announced well in advance of the date they take effect. At some point, the tax rates must be fixed for the year. To the extent the economy changes after setting the tax rates, or to the extent that a set of projections proves inaccurate, a state might not collect the amount of revenue requested. Revenue targets are merely targets, after all.

In the short term, states may not actually raise the amount of money demanded. Yet this problem is easily resolved within the context of a multi-year timeframe. If a state experiences a revenue shortfall in a year, the default tax rates for the subsequent year can be adjusted to make up for the shortfall. Instead of looking only to the current year’s revenue targets when setting tax rates, the forecasting agency could factor any shortfall or surplus from the previous year into the amount of revenue requested. The agency would then estimate the tax rates needed to raise the combined revenue target. These tax rates would become the default policy outcome for the year. If state or local policymakers wish to raise or lower the level of taxes to be collected, they would simply adjust the revenue targets causing the forecasting agency to recalculate the tax rates based on the new amount of revenue requested. Over a longer timeframe, states must still either project revenue from the baseline of tax rates or project tax rates from the baseline of revenue targets. Both systems require significant delegation to administrative agencies or other forecasting staffs.

On a related note, this Article previously argued that a significant obstacle to the adequate financing of rainy-day funds is the unreliability of economic forecasts. A skeptical reader might question whether unreliable forecasting can really prevent states from fully relying on rainy-day funds as a first-best solution to fiscal volatility, without preventing states from adopting an alternative baseline. However, estimating the proper size of rainy-day funds requires the state to make predictions across entire economic cycles, forecasting at least six to eight years ahead. Conversely, adopting an alternative baseline only requires forecasting estimates for a year into the future. If we were to charge an administrative agency with the power to mandate full financing of rainy-day funds, the agency would need to predict how long each boom and bust would last and how much of current economic activity is a result of volatility around the steady state as opposed to trends in steady-state growth. In contrast, estimating what tax rates are needed to meet revenue targets only requires projections for the condition of the economy a year or so in advance of the estimation. Moreover, any errors are easily remedied by adjusting the following period’s tax rates to compensate.

241. See supra notes 91–94 and accompanying text.
unreliability poses a much greater problem for the adequate financing of rainy-day funds than for adopting a revenue-targets baseline.242

So far, our discussion has focused on the issues that arise in implementing a revenue-targets baseline. Implementing a spending-needs baseline raises near identical concerns. However, it is useful here to distinguish between a partial spending-needs baseline and a complete spending-needs baseline. A partial spending-needs baseline works essentially like a revenue-targets baseline, except that the revenue targets are further adjusted based on metrics for program needs. For instance, the administrative agency might start with a baseline of holding revenues constant, perhaps indexed for inflation or GDP growth, but then adjust the baseline to meet the funding needs of countercyclical entitlement programs like Medicaid. As additional beneficiaries qualify for Medicaid in a downturn, the agency would adjust the baseline so as to automatically allocate revenues to fund these additional beneficiaries. After adjusting the baseline as appropriate, the agency would then set tax rates so as to keep discretionary revenues constant after adjusting for any changes in the funding needs of entitlement spending programs.

In contrast to this partial spending-needs approach, a complete spending-needs system would set tax rates to fund legislative spending authorizations, instead of the revenue targets being calculated independently of spending. Under this approach, balanced-budget constraints would have no independent force. Legislatures would only deliberate directly on spending, with taxes being calculated based on the revenue needed to fund the authorized spending.

Although the complete spending-needs system is a plausible means of adopting an alternative baseline, it is discussed here mostly to highlight its differences from a partial spending-needs system and from a revenue-target system. Under the two latter systems, balanced-budget constraints continue to exert independent force. Legislatures cannot simply increase spending and then rely on the rate-setting agency to fund this spending. Instead, if legislatures want to increase spending under either of these systems, they must explicitly raise taxes by increasing the revenue target. All these systems change the mechanism through which legislatures raise and lower taxes from adjusting tax rates to adjusting the revenue targets. But neither revenue-targets baselines nor partial spending-needs baselines relieve legislatures of the need to set the level of taxation and to conform spending to revenues generated by the chosen tax levels.

Both spending-needs baselines and revenue-targets baselines are intended only to change how states respond to fiscal volatility, not to alter the evolution of steady-state policies. Nevertheless, adopting either baseline would have the

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242. Additionally, the main obstacle to full financing of rainy-day funds remains the ability of the dominant political coalition to raid these funds either explicitly or through the use of gimmicks.
side effect of altering the default policy response to changes in long-term economic growth rates. With tax rates as a baseline, the default policy response to improving long-term growth trends is increased revenues, and the default response to worsening growth trends is reduced revenues. Under the alternative baselines, revenues would remain constant while tax rates would increase or decrease, respectively.

This Article’s arguments for why tax rates should absorb the majority of fiscal volatility do not apply to changing long-term growth trends. But neither is there any particular reason to think that the default response to changing long-term growth trends should be changes to future revenues as opposed to future tax rates. Which default response we prefer depends on the metric we wish to use to evaluate the future size of government. Yet both metrics are incomplete; to rationally determine preferences for the future size of government in the face of changing growth trends, we would need information about both the burden taxes impose on the economy (related to tax rates) and about the cost of funding the public spending we desire (related to revenues). By definition, an unexpected change in long-term growth trends means that we cannot have accurate information about both future tax rates and future revenues, because changing growth trends alter the relationship between tax rates levied and revenues generated.

As neither existing tax-rates baselines nor the alternative baselines discussed in this Article offer any clear advantages for responding to changing long-term growth trends, we should choose the baseline that best responds to short-term fiscal volatility. Both revenue-targets and spending-needs baselines are better options than tax-rates baselines. States have numerous design options for how to construct an alternative baseline. But the details of implementation decisions should not distract from the overriding concern of improving how states manage the fiscal volatility problem.

CONCLUSION

As this Article goes to press, states are facing yet another round of budget crises as a result of the ongoing recession. Predictably, states have begun slashing funding for a variety of spending programs. State budget problems tend to lag behind declining economic conditions, and states have a history of using rainy-day funds and budgetary gimmicks to muddle through the early parts of a downturn. As such, we do not yet have the data needed to analyze state responses to the recent recession. Still, if history is a guide, state budget conditions will continue to deteriorate even as the overall economy improves.

244. Id. at 4.
245. FRAMING THE CHOICES, supra note 37, at 5–6.
As the current recession appears dramatically more severe than recent analogs, there is reason to fear the worst.\textsuperscript{246}

Current trends suggest that fiscal volatility will become an increasingly pressing problem over the coming decades.\textsuperscript{247} States will eventually recover from their current crises, but even more dire future crises wait just around the corner. This Article has argued that the risk and uncertainty produced by fiscal volatility dramatically undermines the effectiveness of state spending programs. Unless states proactively develop a framework for managing fiscal volatility, increasingly severe revenue fluctuations threaten to devastate the vitality of the states' public sectors.

This Article has proposed one potential solution for managing the fiscal volatility problem. Undoubtedly, future papers will explore alternative approaches.\textsuperscript{248} Nevertheless, this round of state budget crises presents an opportunity that should not be ignored. As states reevaluate their fiscal structures, they should consider long-term approaches for managing fiscal volatility. An effective discussion of these issues must begin with risk-allocation theory, and should include a discussion of budgetary baselines.

Hopefully, this Article will begin a dialogue about the roles that risk allocation and budgetary baselines might play in forging a better structure for managing fiscal volatility. As the saying goes, "a crisis is a terrible thing to waste."\textsuperscript{249}

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{246} See McNichol & Lav, supra note 243, at 3.
\item \textsuperscript{247} See supra notes 48-54 and accompanying text.
\item \textsuperscript{248} For a discussion of alternative solutions for the state of California, see David Gamage, Coping Through California's Budget Crises in Light of Proposition 13 and California's Fiscal Constitution, in After the Tax Revolt: Proposition 13 Turns 30 59-65 (Jack Citrin & Isaac William Martin eds., 2009).
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