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MORAL HAZARD IN A MODERN FEDERATION

ALEX WILLIAMS

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Preface

The US Congress is currently in the early stages of negotiating the next of phase of an economic rescue package to deal with the COVID-19 fallout. One of the key pieces of business before them is the impending crisis in state and local government finances—a combination of collapsing revenues (due to lockdowns and the uncontrolled spread of the virus) and the fact that states have been left to stand up 50 separate pandemic response initiatives. At this time, reports suggest there is no agreement on extending significant financial aid to state and local governments (while the House-passed Heroes Act contains $1 trillion in aid to states and municipalities, Senate Republicans have initially proposed no broader aid beyond $100 billion that would be earmarked for schools).

As it stands, we are in danger of recreating one of the economic dynamics that plagued the last recovery. The growth cycle that ended this past spring was the slowest in postwar history, and part of the reason for that historically sluggish GDP growth was that it was also the only postwar recovery in which real government spending shrank (it was only in 2019 that overall public spending rose above its 2009 level). Inadequate government expenditure has been one of the central structural weaknesses that has rendered the US economy fragile and anemic, and austerity at the lower levels of government has played a significant role in this dynamic—without federal grants, it will do so again, as we head toward sharp state and local budget cuts and widespread layoffs among public employees during a period of double-digit unemployment.

To the extent there are principled objections to the federal government providing financial support to states, they tend to rest on flawed theoretical foundations, as Alex Williams argues in this policy brief. One of more the commonly expressed objections is rooted in the argument that federal fiscal aid creates moral hazard. Although sometimes framed in its partisan version as "bailing out high-spending blue states," the broader theoretical argument can be found articulated in the fiscal federalism literature, as Williams shows. If state governments form expectations that they can rely upon federal support, so the traditional argument goes, they will have an incentive to spend beyond their means.

The central weakness of this moral hazard objection, in formal terms, is it that rests on a presupposition that state governments are "agents" in a principal–agent problem. State and local government revenues are extremely vulnerable to the business cycle, and expenditures are also largely dependent on variables outside such governments' control. Moreover, institutional barriers prevent states and municipalities from being able to hedge these risks—borrowing from concepts in corporate finance, Williams observes that they cannot create the necessary capital structure to weather economic downturns. In addition, budgetary contraction contributes to a worsening of local economic conditions, further reducing revenues and renewing the problematic cycle. In formal terms, a government in such a position is, properly understood, a principal with respect to the business cycle, not an agent.

There *is* a moral hazard problem at work here, Williams points out, but it is not the one suggested by critics of federal aid to state governments and municipalities. Despite the fact that the federal government is the only agent that can backstop state revenues during a crisis, federal lawmakers have an incentive to refrain from doing so. Federal legislators may burnish their reputations for budget discipline while state and local officials face the political price for layoffs and cuts.

The solution to *this* moral hazard problem, according to Williams, is to link federal support of state and local revenues to specified macroeconomic conditions, rather than the inclinations of federal politicians. In a previous publication (Policy Note 2020/2), Williams sketched out one such trigger-based proposal, in which aid would be tied to local unemployment rates, for instance.

It remains unlikely that significant financial support for states and municipalities will emerge from current congressional negotiations. Future lawmakers, however, should aim higher than a mere one-off package of grants. Without a more comprehensive solution involving automatic stabilizers, we are likely to replay the same fiscal drama with every crisis. Recovery from the pandemic will require many departures from the status quo; an adjustment to fiscal federalism along the lines envisioned in this policy brief would go a long way toward strengthening budgetary responsibility—properly understood—in the United States.

As always, I welcome your comments.

Dimitri B. Papadimitriou, *President*
August 2020

The past ten years have seen a wide variety of economic and political strains in different federal systems. Despite the quick recovery in GDP, some US states failed to regain pre–global financial crisis trend growth rates in their tax revenues for up to ten years. State governments currently face a fiscal squeeze as the front line of the COVID-19 crisis. State budget shortfalls the likes of which have never been seen are coming. These shortfalls will be driven by increased health spending, but more importantly by massive revenue loss owing to the economic impacts of both the virus itself and shelter-in-place orders designed to combat the virus. So far, state fiscal support has been targeted narrowly at health expenditure to slow the spread of COVID-19. State tax revenue loss due to economic shutdowns has been ignored at the federal level. The Department of Labor has extended support to depleted unemployment trust funds at the state level; however, this support is very pointedly in the form of loans and not grants. The refusal of the federal government to support the states through this period of extreme revenue loss may seem inexplicable as compared to the willingness of the federal government to embark on stimulus payments to individuals. However, this refusal has deep roots in the fiscal federalism literature. In this policy brief, I trace the arguments in the mainstream economic literature that support and justify this refusal and show them to be critically flawed. I offer an alternative account of the relationship between the federal and state governments grounded in balance sheet dynamics. I then show how this account points to a simple solution to the operative moral hazard problem between states and the federal government: trigger-based state fiscal aid.

First, I examine the traditional arguments within the fiscal federalism literature. This literature considers states to be individual agents responsible for their own taxation and expenditure. Bailouts from the federal level are figured as promoting moral hazard—encouraging states to spend beyond their ability to tax, safe in the knowledge that the federal government will cover their bad debts. However, this frame rests on a mischaracterization of the institutions of state governments and a misunderstanding of the incentives of politicians at the federal level.

Next, I use the work of Michael Pettis to identify the necessary and sufficient conditions for a government to be considered an agent with respect to the business cycle. I find agency requires the ability to build one's own capital structure. If governments cannot do this, then the relationship between income and expenditure at different points in time and different macroeconomic states of the world is beyond the government's control. Institutional arrangements prevent state governments in the United States from designing their own capital structure. Expected incomes and expected expenditures are functions of variables outside the control of the state government, and state governments are institutionally barred from building capital structures that hedge their exposure to these outside variables. By contrast, the federal government can and does constantly refine its capital structure through, among other things, the open market operations of the Federal Reserve.

Accommodating the above facts requires we reject the moral hazard arguments of the fiscal federalism literature. The federal government is the lone agent with respect to the business cycle in the federation, while state governments are each individually principals. When a depression hits, the federal government can choose to support state governments through fiscal aid, or not. If politicians choose not to support states, they reap the political rewards from not increasing the federal debt and can shift responsibility for negative outcomes to the state governments themselves. They may even say that supporting states during economic downturns produces a moral hazard problem, which creates incentives for states to spend beyond their means. The federal government gets credit for curtailing spending while avoiding blame for the layoffs and funding crises experienced by state governments. The approach to state fiscal support in the aftermath of the 2008 crisis provides ample evidence of this dynamic. However, this is a straightforward moral hazard problem that can be resolved by aligning incentives between principal and agent. To do this, we must mandate automatic and unconditional fiscal support of state governments by the federal government—tied to economic indicators rather than the capriciousness of federal legislators.

Moral hazard problems are central to the mainstream fiscal federalism literature. To paraphrase H. L. Mencken, this literature is haunted by the fear that someone, somewhere, may be receiving a benefit for which they did not pay the full cost. The most common form of moral hazard argument in the literature is "concentrated benefit and dispersed cost" (Oates 1988; Tresch 2015). In these arguments, it is assumed that state governments will spend more than they can afford on services and infrastructure improvements. States then require a bailout from the federal government, which assigns the benefit of the spending to the residents of the state, and the costs to everyone in the federation. In this formulation, states are agents and the federal

government—represented as the sum of all other states rather than an independent entity—is the principal.

The traditional story makes a kind of single-period, microeconomic sense. If we assume that all budgets are created de novo in each period, with perfect foresight, then an unbalanced budget is evidence of intentional overspending. If a state engages in intentional overspending, it will be unable to make all its payment commitments and have to be bailed out by the federal government. However, the federal government is considered just a veil behind which the other states are added up. Each state has a finite revenue stream—state taxes, and federal taxes as a sum of contributions by individuals within each state—and this bailout is seen as a redirection of that revenue stream. These arguments are given a moral flavor, with the bailouts rewarding greedy or fiscally irresponsible actors while penalizing the frugal, forgotten man. State governments are figured as households with strict budgets, rather than businesses or governments with managed capital structures. If we grant the literature its assumptions, then the central worry is concentrated benefit and dispersed cost.

Despite offering an alluring morality play that validates progressively stricter austerity by state governments, the moral hazard argument used in the fiscal federalism literature is nonsensical in the US context. There are structural problems in the argument itself, methodological problems in applying it to the experience of state governments, and substantial empirical disconfirmation in the historical experience of the United States. I will deal with each of these in turn.

Most important is that these arguments misunderstand what it means to be an agent. Their story looks at static allocations against a constant revenue stream. States spend too much because they are intentionally "living above their means," like a household building up credit card debt to keep up with the neighbors. They may be prevented from accumulating significant on-budget debt by balanced budget amendments, but still accumulate debt through off-budget enterprises and their capital expenditures account (Bennett and Dilorenzo 1982; Joulfaian and Marlow 1991). They also, in this argument, put together insufficient savings in rainy day funds to weather a cyclical downturn. Problems are believed to be the consequence of intentional choices about the level of state spending in each economic period. Macroeconomic factors like the unemployment rate and state of aggregate demand do not enter into it. In this story, when there is a downturn, the correct response—the response that is considered the agent acting in the interest of the principal—is to cut spending and raise taxes to balance the budget (McNichol 2012). If all states do this, the argument presumes, then there is no more budget problem because all states are "living within their means," even if that means catastrophic unemployment and insufficient state services. This is an acceptable policy outcome within the mainstream economic literature, as the costs and benefits of government in each state are localized to that state and there is no longer any risk of concentrated benefit and dispersed risk.

This is the kind of story a parent tells a child about why it is important to save some of their allowance. It is not the kind of story that can guide economic policy. We have known since John Maynard Keynes that an approach like this will exacerbate an economic downturn by forcing states to cut spending and raise taxes. Requiring that the economic adjustment come from budget-constrained entities means that even though budgets balance, the contraction in aggregate demand will impart substantial costs on all participants. Although it looks on a surface level as though all units are internalizing the costs of government, in reality the retrenchment in each state creates a worse macroeconomic environment for all other states. This worse environment then redounds on the state originally tasked with living within its means, starting the cycle anew.

For an approach that allows us to make sense of public spending in a federal system, we have to look to the work of Michael Pettis in *The Volatility Machine* (2001). Pettis examines fiscal policy from the perspective of corporate finance, rather than economics per se. This provides a much clearer view not only of government finance, but of what a government must be able to do in order to be considered an agent with respect to the business cycle.

Pettis takes great care to point out that governments necessarily have a capital structure, same as corporations, albeit with different goals. The ultimate goal of most corporations is the production and sale of some good or service. However, corporations are subject to an enormous variety of economic crosswinds that may frustrate this simple goal. The classic example is that of a car manufacturer that sells a large number of cars in the export market. The car manufacturer is good at making cars, not timing changes in the exchange rate. As such, they try to buy or sell contracts to hedge risks that are not related to their core business. In this case, the car company would attempt to hedge its exposure to changes in the exchange rate between its home country and the country where it exports cars. This can happen in a variety

of ways—forwards, swaps, or other derivatives—but the goal is the same: to protect the company's profitability from changes in revenue or expenditure unrelated to their core business (Hull 2018). This is the classic model of financial derivatives as insurance policies for productive enterprise, rather than as a form of gambling (Mackenzie 2006).

These financial quantities—debt, derivatives, and equity—are added to the physical capital goods owned and leased to facilitate production to constitute the capital structure of the company. Every company's capital structure is sensitive to changes in many different economic variables. The goal when constructing a capital structure is to choose combinations of physical plant and financial contracts such that when revenue increases, costs increase and when revenue decreases, costs decrease. This reduces net income volatility and ensures that revenue exceeds expenditure under as many states of the world as possible (Pettis 2001). Companies give up on the possibility of big windfalls in exchange for safety from extreme downsides (Hull 2018). While the company may make more or less money by operating in this way, it can be reasonably certain that its status as a profitable going concern will not come under threat from changes in economic variables unrelated to their core business. This certainty allows the company wider latitude to plan projects in their core competencies. A well-run company tailors their capital structure so as to reduce volatility in net revenue while a poorly run company ends up with a capital structure that amplifies volatility and may force default, bankruptcy, or severe curtailment of operations for reasons unrelated to core competitive competencies.

What is crucial to take away from this account is the fact that companies are able to build a capital structure in the first place. No company runs a balanced budget, and the structure of production requires that money be spent before revenue can be recouped. The goals of the capital structure are to ensure that business operations are not disrupted by changes in economic variables outside their control and to provide low-cost final funding. A correlated capital structure stabilizes the revenue and expenditure sides of the balance sheet. When revenues go up, costs go up. When revenues fall, costs fall. The distance between them stays relatively stable. Pettis takes this basic corporate finance insight and extends it to sovereign budgets and capital structures.

In *The Volatility Machine*, Pettis argues that countries avoid costly financial crises by pursuing capital structures that reduce volatility. The goal is to create a balance sheet that ensures autonomous stabilization between the flows of revenue and expenditure in a variety of forms. These include the mix of loans taken in domestic and foreign currencies, foreign currency swaps, and a variety of other measures. Even the prices of commodities that the country imports and exports are taken into account as quasi-assets and quasi-liabilities to be hedged against (Pettis 2001). What is most important about the capital structure is that both the revenues and expenditures adjust in the same direction when external economic conditions change. This protects the ability of the country to meet its import and foreign currency needs while providing a constant level of services.

This works well as a practical approach but implies a radically different underlying theory of economic agency than that of the moral hazard story presented in the fiscal federalism literature. In the traditional story, states have direct control over the amount they receive in tax receipts and the amount they spend on services, investment, and state employment. In each static current period, they set spending and income. If one believes that this is the case, then the deficit is a control variable and states can and should be held accountable for the failure to match revenues and expenditures. It is a simple case of choosing to spend too much and hoping to be bailed out. This is what the fiscal federalism literature argues.

In contrast, Pettis's account implies that current-period revenue and expenditure are not under the direct control of governments. Attempts to match revenue and expenditure are easily and frequently thwarted by changes in economic conditions outside the control of the government. Despite this, governments are not powerless. They have the ability to control whether revenue and expenditure move together or apart when the economic situation changes. A state that pursues an anticorrelated capital structure in an attempt to maximize growth during a boom can be held accountable for its failure and need for a bailout. Similarly, a state that pursues a correlated capital structure to hedge against the boom and the bust can be commended and will not suffer a fiscal crisis during an economic downturn.

The ability to target policy outcomes—to target a certain level of taxation and a certain level of spending—depends on the ability to design and build the correct capital structure. In this way, states exercise agency with respect to the business cycle, ensuring that they will be able to meet their payment commitments regardless of the state of demand, the interest rate, or the exchange rate. It may not seem like the single-period agency

of the mainstream economic literature, for example, choosing the level of social welfare benefits or taxation. However, it is the condition of possibility of being able to target any single-period value. If movements in variables outside the control of the government can destroy the government's ability to make required payments, it cannot be said to have agency over the single-period values either.

Logically, if an entity does not have control over the decision variable in a principal–agent problem, it is a principal, not an agent. If a sovereign state can build a capital structure that has the possibility of ensuring it is resilient to adverse moves in unrelated economic variables, it is an agent, and the people and businesses in that state are the principals (Pettis 2001). This principal–agent problem is central to the debt market behavior of emerging market sovereigns in Pettis's account. The moral hazard problem there is to avoid the temptation to seek the gains from pursuing an anticorrelated capital structure during an unrelated boom.

In state governments in the US, the situation is radically different. Statutory, constitutional, and institutional requirements prevent states from choosing their capital structure. They have highly variable tax receipts from a variety of different channels and mandated expenditures that increase dramatically when the economy crashes (Mattoon and McGranahan 2012; McCubbins and Moule 2010). State governments have massive directional exposure to the state of the US economy. By itself, this is not an insurmountable problem. Were states able to hedge these risks, by owning financial assets that provided greater income during an economic downturn or by financing operations through debt whose payments declined in a downturn, they could construct a manageable capital structure. However, balanced budget requirements prevent states from assembling the necessary capital structure on their own. States are mandated to keep current-period spending in line with current-period tax receipts and are unable to issue debt for general operations (Mattoon and McGranahan 2012). The only option states have to counterbalance their naturally anticorrelated capital structure is to accumulate savings. However, states face swings in revenues sufficiently large as to swamp even sizable "rainy day funds" fairly frequently. What states need is insurance against falls in tax revenue, and they are institutionally prevented from acquiring this in financial markets.

With this in mind, it is not possible for states to be represented as the agents in a moral hazard problem. When the economy crashes, their insolvency is not their fault. Given the highly procyclical nature of both their income and expenditure streams, they face an acute capital structure trap in an economic downturn (Pettis 2001). The only agent capable of providing them insurance against this capital structure trap—capable of providing them with a correlated capital structure—is the federal government.

With this turnaround in mind, there is clearly still a moral hazard problem, albeit a very different one from that posed by the fiscal federalism literature. When there is an economic crisis, state government finances collapse. They are forced to cut spending and increase taxes during a recession. The severity of the response is mainly dictated by the severity of the economic crisis, but it can be somewhat ameliorated by the use of rainy day funds held by the states. The procyclical response by state governments worsens the recession locally, as the government lays off workers and curtails spending at the same time as the private sector. This redounds on the tax base available to the state government, which forces a further round of retrenchment. This process mimics Pettis's account of the capital structure trap, where traders are forced into counterproductive, procyclical positions by virtue of their expenses rising at the same time as their incomes fall (Pettis 2001). Traders are forced to sell into a declining market while state governments are forced to cut services into a crashing economy.

In a way, this is the social or governmental equivalent of Minsky's "selling position to make position" (Minsky 2008). In order to balance the budget (make position), state governments are forced to fire teachers and police officers (to sell position). The solution to this problem in a market context is well-identified: provide a lender of last resort to market participants. This has been known to work since Walter Bagehot and is available to participants in an ever-expanding variety of markets (Wray 2015). A solution of this sort is required for state governments to build resilient capital structures, but it must be constructed around the institutional fact that states cannot take on debt to finance current operations.

The only entity capable of providing a counterbalance that would arrest this process is the federal government. At this point, moral hazard reappears. Politicians at the federal level pride themselves on spending as little money as possible, in the name of "sound finance" and "deficit reduction" (Henwood 2019). They consider themselves responsible for—and their voters hold them responsible for—national outcomes. Federal-level

politicians are able to avoid blame for the fiscal crises of state governments by claiming that the state governments were living above their means and undeserving of a bailout by the federal government. They can force state governments to pursue counterproductive austerity, safe in the knowledge that its failure as economic policy will not affect them politically. This is a classic principal–agent problem. The federal government is the only entity that can alleviate the capital structure trap of state governments, but its incentives are such that its decisionmakers benefit from exacerbating the capital structure trap. The moral hazard problem in a modern federation is one in which the federal government is the only entity that can provide state governments the tools they can use to protect themselves from economic conditions outside of their control, but that same federal government has an incentive structure that keeps them from providing these tools to state governments. This is radically different from the conception of moral hazard as concentrated benefit and dispersed cost within the fiscal federalism literature.

From a theoretical perspective, the only way to resolve this actually operative moral hazard problem is to tie the hands of legislators. To do this, I propose a regime of trigger-based autonomous stabilization for state fiscal aid. For instance, block grants could be provided to state governments on the basis of the extent to which a state's unemployment rate exceeds a given baseline (Williams 2020a, 2020b); the mechanics of this type of proposal have been explored in several places and will not be recapitulated here (Bennet 2019; Fiedler, Furman, and Powell III 2019; Sahm 2019). What is central to these stabilization policies, however, is that they are dependent upon prespecified economic or financial facts rather than the whims of federal legislators.

Proposals to support state governments are always met with the question "What about the moral hazard of concentrated benefit and dispersed cost?" in much the same way that proposals to increase government spending are always met with the question "What about inflation?" We have seen clearly that the institutional constraints placed on state governments in the US system prevent them from exercising agency with respect to the business cycle. As such, we must ask in return "What about the moral hazard of *failing* to provide state fiscal relief?"

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About the Author

ALEX WILLIAMS is a macroeconomic researcher and recent graduate of the Levy Economics Institute of Bard College's Graduate Programs in Economic Theory and Policy. His M.S. thesis, "Intragovernmental Automatic Stabilizers," focuses on the need for federal governments to provide stabilization payments to subfederal governments. He is interested in public finance, financial market microstructure, and macro-founded economic theory.