Economic Policy Papers

A Proposal to Eliminate the Distortions Caused by Bailouts

By limiting debt-equity ratios and taxing asset size, policymakers can correct distortions and externalities caused by bailouts

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EXECUTIVE SUMMARY

We argue that bailouts create tax distortions, subsidy distortions and debt-size externalities. We show that an orderly resolution provision as in the Dodd-Frank Act addresses the tax and subsidy distortions but not the debt-size externalities. A regulatory system that imposes limits on the debt-equity ratio of firms and imposes a Pigouvian tax on their size eliminates the distortions and completely corrects the externalities.

Introduction

During the recent financial crisis, governments were faced with the prospect of widespread bankruptcies and liquidations. They responded by bailing out debt holders in many firms, particularly in the financial sector. Policymakers and the general public have become concerned that expectations of such bailouts in the future will distort private incentives toward risk-taking. In particular, the worry is that bailout expectations will encourage firms and households to take on excessive amounts of debt and divert resources from low-risk economic sectors to sectors that are likely to be bailed out in the future. The central policy question is how to design regulations that will address the distortions in private incentives created by bailout expectations.

One proposal to address these distortions is the Dodd-Frank Act.[1] A key provision of this act, which we refer to as the *orderly*

resolution provision, empowers a regulatory authority to impose losses on unsecured creditors. This ensures that firms on the verge of bankruptcy can continue operating without necessarily using tax revenues to pay unsecured creditors. We argue in this policy paper that while the orderly resolution provision may have helped to improve outcomes relative to the situation that existed before the DFA was passed in 2010, it is not the best way to address the key distortions arising from bailouts and is therefore not a sound policy for the future. Moreover, it is risky because of the discretion it gives regulators.

Our proposal is instead to regulate the debt-to-equity ratio of financial firms and to impose a Pigouvian tax on the size of such firms. We argue that doing so is the best feasible way to correct the distortions created by bailout expectations.[2]

The bailout problem

We start from the perspective that because debt contracts are widespread, they must be privately valuable and, in all likelihood, also valuable to society in general. In particular, debt contracts provide incentives for managers to be careful in choosing the riskiness of their investments and to exert appropriate levels of effort in carrying out their responsibilities. This value exists even in the face of the high direct and economic costs associated with bankruptcy, which occur when firms are unable to meet their debt payments. In this context, if governments could do so, they would commit to never intervening in debt contracts other than ensuring that they are enforced. The bailout problem arises, of course, when—as has often happened in the United States and elsewhere—governments are unable to fulfill such a commitment.

When faced with widespread bankruptcies that could have systemic financial repercussions, well-meaning governments are tempted to buy up the debt of firms that are on the verge of bankruptcy and renegotiate debt terms so that firms that would have otherwise gone bankrupt can continue in operation.

Once the crisis is under way, such intervention seems wise from a societal standpoint since it saves the costs generated by widespread bankruptcy and potential systemic collapse. Indeed, by the time the bankruptcy decision is made, the risk of the firm's projects has been undertaken and the efforts of the managers have already been made, so such intervention seems to save on bankruptcy costs and generate no distortions.

However, the anticipation of such government interventions leads firms in sectors that are likely to be bailed out to take on inefficiently high levels of debt and risk, and encourages the managers of such firms to exert too little effort in avoiding financial problems. In sum, the

expectation of bailouts is self-fulfilling; it generates financial distortions that are societally costly and make bankruptcies more probable.

Costs of bailouts

Our analysis leads us to identify three costs associated with bailouts: a tax distortion, a subsidy distortion and a debt-size externality.

A *tax distortion* arises from the higher taxes imposed on households to "pay" for the bailout; such higher taxes distort decisions about how much to work and save. But even in cases where no taxpayer money is involved, two other costs remain, described below.

Suppose, hypothetically, that healthy firms "pay" the cost of bailing out distressed firms in the form of higher taxes. Here, a *subsidy distortion* arises whenever firms do not fully recognize that the bailout they receive when they are distressed is paid for in the form of higher taxes when they are healthy. In this situation, because of the bailout, the firms will take on too much debt and will not appropriately avoid getting distressed in the first place. Tax and subsidy distortions have been extensively studied by economists and financial analysts.

A third cost, *debt-size externality*, is new to the literature on bailouts. A single firm, when making decisions about how much to invest, how much debt and risk to take on and how much effort to undertake to manage its risks does not internalize the effects of its decisions on the amount of intervention by the government ex post. This lack of internalization leads individual firms to become too large and to take on too much debt. When the financial sector overall becomes too large and is excessively indebted, bankruptcies ex post threaten to reduce output so much that the government finds it desirable to intervene to a greater extent. This greater intervention distorts the ex ante decisions about how much to invest, how much debt to take on and how much effort to exert to manage its risks.

Improving bailout outcomes

We take the perspective that it is simply infeasible for governments to pass laws that commit themselves to never bailing out firms. The idea is that regardless of what bills are passed, in the presence of potentially widespread bankruptcies and systemic collapse, the government will find a way to raise taxes on citizens, buy up much of the outstanding debt of distressed firms and greatly lower the amount of bankruptcies ex post.

In line with this perspective, we ask what type of extra powers could be granted to government that would alter the choices of firms in such a way that it lessens distortions from the government's inability to adhere to a commitment to not bail out firms.

Evaluating the desirability of these extra powers requires that we be explicit about a natural benchmark for efficiency and ask whether the regulatory system achieves this benchmark. In formulating this benchmark, the traditional view in economics is that the only achievable outcomes are those that are *incentive feasible*, in that they respect resource constraints as well as private agents' information and incentive constraints. Given our perspective that governments cannot realistically commit themselves to never bailing out firms, we argue that the only achievable outcomes are those that are incentive feasible and *sustainable* in the sense that the outcome must respect the incentives of governments to engage in bailouts ex post. We refer to the best achievable outcome as the *sustainably efficient* outcome. (An outcome with bailouts financed with taxes on private citizens is sustainably *inefficient*. This inefficiency arises from all three costs discussed above.)

The orderly resolution provision

An important motivation behind the orderly resolution provision in the DFA is the idea that the primary distortion from bailouts is the tax distortion. The idea is that by giving regulators the additional power to reduce unilaterally the amount owed by firms to creditors, the regulator will reduce the use of general tax revenues to finance bailouts. Thus, the orderly resolution provision eliminates, or at least lowers, the tax distortion.

Our analysis shows that orderly resolutions can also eliminate the subsidy distortion. Forcing debt holders to absorb all the losses in the event of distress means that when firms design their contracts, they understand that reduced diligence regarding the likelihood of being distressed hurts only their own debt holders. In the best orderly resolution outcome, the orderly resolution authority reduces debt levels of distressed firms so that the government does not intervene further with bailouts financed by either general taxes or taxes on healthy firms.

This provision does not, however, eliminate the debt-size externality. The extent of regulator intervention depends on the aggregate losses due to threatened bankruptcies. Individual firms do not internalize the effect of their decisions on aggregate outcomes and, therefore, on the extent of such intervention. Just as with bailouts, individual firms have incentives to become too large relative to the sustainably efficient outcome. The increased size of the sector induces the orderly resolution authority to reduce debt levels of distressed firms to a greater extent and acts as a transfer from debt holders to managers and holders of inside equity. Managers and inside equity holders become less diligent regarding decisions that reduce the likelihood of becoming distressed. Thus, the orderly resolution provision cannot achieve a sustainably efficient outcome.

While this provision has the salutary effect of eliminating the tax and subsidy distortions, it is worrisome because by giving extraordinary powers to regulators, it allows them to rewrite private contracts between borrowers and creditors. It is widely recognized that governments that give regulators the discretion to rewrite contracts on an ad hoc basis without clearly spelling out the circumstances under which such rewriting will occur can do great harm to the well-being of their citizens. Societies prosper when citizens are confident that contracts they enter will be enforced. The argument for granting regulators the power to rewrite contracts then must be that the tax and subsidy distortions created by the expectations of bailouts are so large that they merit granting wide discretionary authority.

Optimal regulation

It turns out that a relatively straightforward regulatory system can achieve sustainably efficient outcomes. This system limits the debt-equity ratio of financial firms and imposes a Pigouvian tax on the size of these firms. When these two policies are chosen appropriately, the bailout authority has no incentive to intervene during crises. Thus, this system eliminates the tax and subsidy distortions. It addresses the debt-size externality directly. The limits on debt-equity ratios reduce the resources lost to bankruptcy and therefore reduce the incentives of the bailout authority to intervene. The Pigouvian taxes induce individual firms to internalize the effect of their size decisions on the aggregate losses due to bankruptcy and, by doing so, induces them to internalize the effect of their decisions on the extent of government bailouts.

This regulatory system has two advantages relative to the DFA's orderly resolution provision. It is sustainably efficient while orderly resolution is not, and it gives much less discretionary power to regulators. The power to set debt-equity ratios for financial firms has been part of the regulatory system for a long time with well-understood limits on the power of regulators to set these limits in a capricious manner. The idea that taxes can and should be used to address externalities is central to modern public economics.

Conclusion

We have argued that bailouts create tax distortions, subsidy distortions and debt-size externalities. The public finance literature discusses tax distortions extensively, and scholarship on deposit insurance has addressed subsidy distortions. The debt-size externalities are newly identified in this paper, and they arise only if intervention has ex post costs as it does in our dynamic model.

Regulation is needed to correct these distortions and externalities. We have presented a proposal that achieves sustainably efficient outcomes without granting regulators extraordinary discretionary powers.

The general implication of our analysis is that regulation should be most stringent when the bailout authorities have the strongest incentive to intervene. We emphasize that regulation is needed in our framework not because markets on their own lead to inefficient outcomes, but because well-meaning governments that lack commitment introduce distortions and externalities that need to be corrected.

Notes

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Endnotes

[1] Formally, the Dodd-Frank Wall Street Reform and Consumer Protection Act enacted on July 21, 2010. Online at gpo.gov/fdsys/pkg/PLAW-111publ203/html/PLAW-111publ203.htm.

[2] The proposal described here builds on the analysis contained in Chari and Kehoe (2013).

Reference

Chari, V.V., and Patrick J. Kehoe. 2013. "Bailouts, Time Inconsistency, and Optimal Regulation." Staff Report 481, Federal Reserve Bank of Minneapolis. Online at minneapolisfed.org.
