



Contents lists available at ScienceDirect

## European Economic Review

journal homepage: [www.elsevier.com/locate/eer](http://www.elsevier.com/locate/eer)

# Dueling policies: Why systemic risk taxation can fail<sup>☆</sup>



Jakob J. Bosma

University of Groningen, Faculty of Economics and Business, P.O. Box 800, 9700 AV Groningen, The Netherlands

## ARTICLE INFO

### Article history:

Received 28 April 2015

Received in revised form

29 April 2016

Accepted 4 May 2016

Available online 7 May 2016

### JEL classification:

D83

G01

G18

### Keywords:

Systemic risk taxation

Ambiguity

Bailouts

## ABSTRACT

Two policy instruments for the banking sector are investigated, namely systemic risk taxation and constructive ambiguity about bailout policy. Bailout expectations can induce moral hazard in the form of excessive risk taking by banks. Systemic risk taxation induces banks to prefer uncorrelated investments, leading to lower systemic risk formation. Constructive ambiguity generates uncertainty about bailout prospects. However, systemic risk taxation also may inform banks about the regulator's concern for financial stability and thereby its bailout policy. This result leads to a trade-off between systemic risk taxation and constructive ambiguity and highlights the need to consider interdependence across policies when evaluating their effectiveness.

© 2016 Elsevier B.V. All rights reserved.

## 1. Introduction

Achieving two distinct objectives is possible only if at least two independent policy tools are at a regulator's disposal (Tinbergen, 1952). In a similar vein, the pursuit of one objective with multiple policy tools may render the tools interdependent. In the aftermath of the 2007–2009 global financial crisis, new macroprudential regulation reforms have sought to ensure the stability in the financial sector (Basel Committee of Banking, 2009a,b). Recent studies investigate these proposed regulatory tools independently with the implicit assumption and inference that policy tools are independent. Such an assumption of independence can generate hazardous outcomes if the use of one tool might provide an indication that another tool is likely to be used in tandem. Therefore, this study considers the potential of interdependence between two notable policy instruments recently proposed: systemic risk taxation for banks; and constructive ambiguity in bank bailout support (Acharya et al., 2011; Freixas, 1999; Freixas and Rochet, 2011).<sup>1</sup> By evaluating these two policy tools in a joint framework, the proposed signaling game demonstrates the ineffectiveness of a systemic risk tax if the tax reveals the

<sup>☆</sup> This paper benefited from comments received from participants at the 2014 ESBF meeting at Cass Business School, 2013 EEA Meetings, 2013 FIRS conference, the Dutch Central Bank, and at the University of Groningen. In particular, I thank Itai Agur, Wilko Bolt, Max Bruche, Lammertjan Dam, Falko Fecht, Edward Kane, Michael Koetter, Eric Leeper, Allard van der Made, Joel Sobel, Günter Strobl and two anonymous referees for their valuable input. All errors remain my own responsibility.

E-mail address: [j.j.bosma@rug.nl](mailto:j.j.bosma@rug.nl)

<sup>1</sup> Acharya et al. (2011, 2012), and Freixas and Rochet (2011) discuss the merits of a systemic risk tax levied on banks as compensation for future explicit or implicit financial assistance by governments in times of financial crises. Adrian and Brunnermeier (2011) suggest an indirect tax for systemically relevant institutions, in the form of risk-weighted capital and liquidity requirements that have been calibrated against a systemic risk measure. A second strategy regulators can adopt to deter banks' risk-shifting behaviour in response to prospective bailout support is to employ constructive ambiguity about bailout policies (Freixas, 1999; Kocherlakota and Shim, 2007; Shim, 2011).

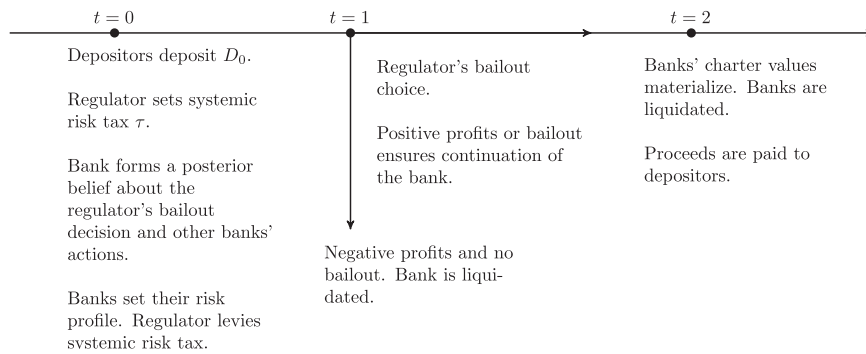


Fig. 1. Game Tree.

regulator's concern for financial stability. That is, taxation limits the regulator's ability to exercise constructive ambiguity about a future bailout policy. If the tax reveals the likelihood of receiving bailout support, banks trade off the costs of the tax for the benefits of a prospective bailout. Introducing a systemic risk tax therefore could even encourage excessive risk taking by banks, rather than achieving its intended goal of curtailing such behaviour.

The methodological approach used to investigate this tradeoff parallels the efforts of [Farhi and Tirole \(2012\)](#) to understand how the time-inconsistency problem of a financial regulator induces banks to coordinate their leverage choices according to the prospect of bailout support. However, the focus of this study is how the tax contributes to interdependence among policy tools, because it may reveal the regulator's concern for financial stability. With respect to endogenous policy decisions, previous studies instead evaluate policy choices in light of speculative exchange rate attacks, anticipated interventions by the IMF, and runs on banks with weak fundamentals ([Angeletos et al., 2006](#); [Chunyang, 2013](#); [Drazen, 2000](#); [Zwart, 2007](#)).

Furthermore, the formation of systemic risk is driven in the model by banks' investment choices, which determine the aggregate correlation structure of banks' returns. This approach therefore builds on models by [Allen and Gale \(2000\)](#) and [Acharya \(2009\)](#) and reflects prior findings about inter-bank return dependence.<sup>2</sup> As a key extension to Allen and Gale' framework, the proposed model includes a regulator who sets a systemic risk tax for banks and faces a commitment problem in its decision to bail out distressed banks. When a substantial fraction of banks become financially distressed, the societal costs of letting distressed banks fail can force the regulator to initiate bailout support.

In the proposed model, banks have heterogeneous, imperfect prior information about the conditions that force the regulator to initiate bailouts. This uncertainty causes the banks' investment choices to be strategic complements ([Acharya and Yorulmazer, 2007](#); [Farhi and Tirole, 2012](#)). As more banks suffer financial distress the cost of their failure to society increases, which leads banks to believe the regulator is likely to initiate bailout support. These beliefs induce banks to prefer more positively correlated returns across the industry, in that they trade off the cost of failing in a crisis state for the benefits of more likely bailout support. To analyze this coordination problem, I use the global games methodology ([Carlsson and van Damme, 1993](#); [Morris and Shin, 1998, 2001](#); [Morris et al., 2003](#)). The implications of the systemic risk tax are twofold in this setting. First, an increase in the systemic risk tax works as a Pigovian-like tax and induces banks not to prefer jointly correlated investments, such that it lowers systemic risk formation. Second, the tax informs banks about the regulator's concern for financial stability and thereby reveals the likelihood of adopting a bailout policy during financial crises.

This study's results suggest that banks' knowledge of the tax level and their private information about the regulator's inclination to initiate bailouts provide means to infer the likelihood of receiving bailout support. A regulator that appears inclined to initiate bailout support has an incentive to conceal its stance towards bailouts and sets a low tax, in order to assume the identity of a tough regulator that is not inclined to bail out. With a taxation strategy based on imitation, a regulator can generate endogenously the necessary uncertainty, which a weak regulator then can exploit as constructive ambiguity. This strategic uncertainty is driven by the observation of a low tax that does not allow banks to distinguish the two regulator types, such that it may curtail coordination in risk taking on bailout prospects. By taking the bailout policy into account, I argue that a systemic risk tax may not effectively curtail systemic risk formation if the tax's level reveals the likelihood of receiving prospective bailout support to the affected banks.

With respect to policy implications, these results suggest the significant risks associated with drawing inferences about the effectiveness of systemic risk taxation with an assumption of independent macroprudential policy tools. If the signaling aspect of a systemic risk tax is ignored in the policy design, certain levels of taxation may signal the regulator's concern and eliminate ambiguity about bailout policies. A consequence would be that the tax is taken for granted, because a future

<sup>2</sup> [Maksimovic and Zechner \(1991\)](#) show that the risk characteristics of firms' cash flows are endogenously determined by aggregate investment decisions in the industry. Financially distressed industry peers impose private costs on the leverage of banks and may induce risk-shifting behaviour ([Shleifer and Vishny, 1992](#)). [Rajan \(1994\)](#) connects managerial short-termism and reputation concerns to decreased credit policy leniency when other banks are likely to do the same. [Acharya and Yorulmazer \(2007\)](#) consider the return dependence that results when many banks coordinate on bailout prospects.

Download English Version:

<https://daneshyari.com/en/article/5066565>

Download Persian Version:

<https://daneshyari.com/article/5066565>

[Daneshyari.com](https://daneshyari.com)