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# Government Intervention through an Implicit Federal Backstop: Is There a Link to Market Power?

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[David L Eckles](#)<sup>1</sup> & [James I Hilliard](#)<sup>2</sup>

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## Abstract

We estimate the impact of exogenous capital shocks, namely the Troubled Asset Relief Program (TARP), on prices in various property-casualty business lines. We hypothesise that these capital shocks may distort insurer incentives. Specifically, insurers may exploit the implicit governmental guaranty by taking additional pricing risks in order to gain market share. Our results do not support this hypothesis. We find no evidence of a company-specific, or industry-wide, moral hazard problem associated with the implicit (explicit, in some cases) federal backstop created by TARP funds.

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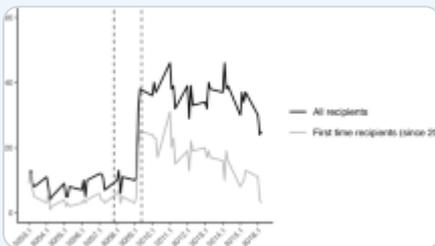
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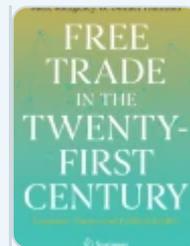


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## Notes

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1. [Merton \(1977\)](#).
2. The federal government also selectively protected other financial institutions during this time period.
3. [Harrington \(2009\)](#); [Grace, \(2011\)](#).
4. [Harrington \(2009\)](#).
5. [Pleven and Reddy \(2009\)](#).
6. In light of the accusations levied against AIG, the Government Accountability Office (GAO) conducted an inquiry into AIG's potential underpricing and did not find evidence that the firm used its capital influx to engage in anti-competitive behaviour. Contrary to the claims made by competitors, the report found that AIG's price cuts, where they occurred, were in line with expectations, and suggested that AIG, in fact, lost business due to reputation issues ([Williams, 2009](#)). A similar study conducted by the insurance regulator in Pennsylvania also concluded that AIG's pricing "behaviors were not out of

line with the underwriting, pricing and price monitoring behaviors of their competitors". The GAO report did not indicate whether AIG's business losses were mitigated by pricing strategies.

7. Even though AIG's difficulties stemmed from operations in the AIG Financial Products division, the apparent perception by some competitors was that the bailout would provide capital relief company-wide, as noted by Mr. Kelly.
8. [Keeley \(1990\)](#).
9. Much of the money AIG received was used to offset losses from their Financial Products division. However, the moral hazard problem created by the TARP funds is independent of funds deployment. That is, it is the existence of the potential capital infusion that creates the moral hazard problem for insurers, not the range of investment options.
10. [Cummins and Danzon \(1997\)](#).
11. [Phillips et al. \(1998\)](#).
12. [Bain \(1951\)](#).
13. [Stigler \(1964\)](#).
14. [Choi and Weiss \(2005\)](#) and [Weiss and Choi \(2008\)](#) show that more efficient insurers do in fact earn higher profits by aggressively competing along the price dimension.
15. E.g. federal deposit insurance as in [Keeley \(1990\)](#).

16. [Shrieves and Dahl \(1992\)](#).
17. [Cummins and Sommer \(1996\)](#).
18. [Baranoff and Sager \(2002\)](#).
19. [Lin et al. \(2014\)](#).
20. [Cheng and Weiss \(2013\)](#).
21. [Samuelson and Zeckhauser \(1988\)](#).
22. [Pope and Ma \(2008\)](#).
23. When market shares are expressed in percentage terms, HHI takes a value between 0 and 10,000, with 10,000 representing a monopoly market.
24. Other measures of concentration, in particular, the  $n$ -firm concentration ratio, tend to underestimate the impact of the fringe firms, and are rarely used by economists.
25. As an example, in some lines, rates must be approved by regulators at the state level for purposes of consumer protection and capital adequacy.
26. [Choi and Weiss \(2005\)](#).
27. [Weiss and Choi \(2008\)](#).
28. E.g. [Stigler \(1964\)](#).

29. [Cummins \(2002\)](#).
30. [Cummins and Weiss \(1991\)](#).
31. These data are obtained from the Federal Reserve Economic Database housed at the St. Louis Federal Reserve Bank.
32. [Cotterill \(1986\)](#).
33. The inverse HHI does not give the exact number of firms in the market, but rather is the number of firms that would be in the market if each firm had the same market share.
34. Since we are concerned with pricing changes that may be short term in nature, we would ideally be able to observe our variables on a more regular basis than annually. Using annual data certainly seems to bias us *against* finding support for our hypothesis.
35. *Data source:* National Association of Insurance Commissioners, by permission. The NAIC does not endorse any analysis or conclusions based upon the use of its data.
36. [www.iii.org/issue\\_updates/regulation-modernization.html](http://www.iii.org/issue_updates/regulation-modernization.html).
37. Only AIG (\$182bn) and Hartford (\$3.4bn) actually received TARP funds. Since AIG was the largest recipient, we also conduct the analysis with AIG separately.
38. We tested for differences in coefficients between all TARP-eligible firms and

AIG for each line of business. We identified only a few differences in pricing behaviour related to market concentration during the bailout period, but we also found significant differences between models between the two subsamples for most of the business lines. The differences between models suggest that AIG's pricing behaviour differs from that of other carriers over time, but there is no systematic evidence that AIG took advantage of its bailout funding to increase its market share in competitive markets. Results of these tests are available from the authors upon request.

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## Author information

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### Authors and Affiliations

**Insurance, Legal Studies and Real Estate, University of Georgia, 206  
Brooks Hall, Athens, 30602, GA, U.S.A.**

David L Eckles

**W.A. Franke College of Business, Northern Arizona University, 20 W.**

**McConnell Dr. Flagstaff, 86005, AZ, U.S.A.**

James I Hilliard

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