Regulatory competition and forbearance: Evidence from the life insurance industry

Michael K. McShane\textsuperscript{a,}\textsuperscript{*}, Larry A. Cox\textsuperscript{b}, Richard J. Butler\textsuperscript{c}

\textsuperscript{a}Old Dominion University, Department of Finance, 2124 Constant Hall, Norfolk, VA 23529, USA
\textsuperscript{b}The University of Mississippi, School of Business Administration, P.O. Box 1848, MS 38677-1848, USA
\textsuperscript{c}Brigham Young University, Department of Economics, 183 Faculty Office Building, Provo, UT 84602-2363, USA

\textbf{Abstract}

Regulatory separation theory indicates that a system with multiple regulators leads to less forbearance and limits producer gains while a model of banking regulation developed by Dell'Ariccia and Marquez (2006) predicts the opposite. Fragmented regulation of the US life insurance industry provides an especially rich environment for testing the effects of regulatory competition. We find positive relations between regulatory competition and profitability measures for this industry, which is consistent with the Dell'Ariccia and Marquez model. Our results have practical implications for the debate over federal versus state regulation of insurance and financial services in the US.

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1. Introduction

The economic theory of regulation (ETR) has evolved over the past four decades to explain the relations of producers in an industry, their consumers, and their regulators. Stigler (1971) often is credited with the seminal work in describing how producers can influence regulators of their industry to win benefits that otherwise might accrue to others, although these benefits are constrained by information and organization costs (see, e.g., Peltzman et al., 1989). Subsequent researchers expand the theory to better explain the limits of influence held by producers with regulators (Peltzman, 1976; Becker, 1983) and to generate empirical evidence in support of the expanded ETR (Danzon and Harrington, 2001; Muth et al., 2003).

While many studies of the traditional ETR focus on industries overseen by a single regulator, researchers have begun to explore the effects of multiple regulators, especially in the financial services industry (see, e.g., Merton, 1995; Kane, 1999; Huizinga and Nicodème, 2006). Franks et al. (1998) specifically estimate both the direct and indirect costs of regulation for various sectors of the financial services industry in the UK, US, and France. A portion of their results imply that the cost of life insurance regulation is comparatively high in the US, which they attribute to the “extra layer” of state regulation. Franks et al. focus only on regulatory costs and not possible benefits, which they admit to being a generally serious omission in the finance literature. Merton (1995) and Kane (1999) suggest that one source of such benefits can be regulatory competition.

Laffont and Martimort (1999) provide a theoretical framework showing that competition between multiple regulators raises the transaction costs of collusion between regulators and regulated firms. A major implication of their model is that separation of regulatory responsibilities among multiple regulators reduces regulatory forbearance and, therefore, producer gains attributable to their influence with regulators. This has become known as regulatory separation theory. Dell’Ariccia and Marquez (2006) develop an alternative regulatory model showing that, whether in financially integrated economies or within single economies, multiple regulators normally will generate a “competition in laxity” in setting and maintaining regulatory standards. In this study, we empirically test the very different implications of these alternative models of regulatory competition.

In line with the theoretical work of Acharya (2003) and Dell’Ariccia and Marquez (2006), we focus on empirical examination of returns, i.e. profitability, of US life-health insurers during the period 1999 through 2003. The US insurance industry is particularly well-suited for testing because insurers are regulated by designated bodies in each state and territory in which they issue

\* Corresponding author. Tel.: +1 757 683 3602; fax: +1 757 683 5639.
E-mail addresses: mmcshane@odu.edu, huggsio@yahoo.com (M.K. McShane), lcox@bus.olemiss.edu (L.A. Cox), richard.butler@byu.edu (R.J. Butler).

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policies. An insurer writing business in the US can be subject to as many as 55 regulators.\(^1\)

While state insurance regulators attempt to coordinate many standards via model legislation developed through the National Association of Insurance Commissioners (NAIC), state legislatures independently pass their own regulations pertaining to capital adequacy, policy forms and rates, market conduct, and agent licensing, so regulations often are not uniform (Grace and Phillips, 2007; Klein and Wang, 2009). Further, regulatory compliance requirements and actions can vary across state regulators (Willenborg, 2000). Most state insurance regulators also have an economic development role within their states, which can only serve to further promote competition between state regulators. Insurers are net income generators for virtually all states in the US. In 2007, insurers paid premium, franchise, and income taxes and fees to states that exceeded the cost of state insurance regulation by approximately $15.5 billion (Lehmann, 2008).

Fortunately for researchers, coordination of accounting standards via the NAIC allows us to collect and test comparable financial data for insurers domiciled in the US and also facilitates tracking of the number of regulators to which each insurer is subject. This means that US data are more homogeneous and tractable for comparative analysis than international regulatory data, which often are subject to heterogeneous legal systems, economic structures, and accounting practices.

Our results generally support the implications of Dell'Ariccia and Marquez's regulatory competition model. In particular, greater regulatory competition across the states in the US leads to higher profitability for regulated insurers, which suggests greater forbearance by state regulators and a “competition in laxity.” Our test results for capital adequacy measures also are consistent with those for profitability. These findings should be of interest to researchers, but also to political leaders, regulators, investors, and, of course, the insurance industry in the US and elsewhere.

2. Related literature

The extant research on regulatory competition in financial markets can only be characterized as diverse. Kane (1997, 1999) contends that regulatory competition results in more efficient regulatory services. White (1994) argues that cartel instability results in cooperation problems among independent regulators, however. He specifically implies that regulators will cheat instead of cooperating on uniform regulation, resulting in a race to the bottom to attract firms. Vives (2001) argues that the current system of home and host country regulation of financial services in the European Union leads to negative cross-border externalities. While several recent papers have empirically investigated bank and insurance regulation (see, e.g., Gatzert and Schmeiser, 2008; Zhao et al., 2009), none have considered regulatory competition.

As noted previously, Laffont and Martimort (1999) provide a theoretical framework in which regulation of a single set of agents is divided among multiple, self-interested regulators. Their model indicates that the separation of information among regulators results in Bayes–Nash behavior, which increases the costs of collusion and reduces the likelihood of regulatory capture.\(^2\) In the Laffont and Martimort model, producers subject to more regulators are less likely to be able to gain influence with, and therefore subsidies from, their multiple regulators.

Empirical tests of the Laffont and Martimort implications have been conducted using data from the US insurance industry. Virtually all of these studies apply a binary variable for single-state regulation to proxy for regulatory forbearance. Willenborg (2000) finds that as they approach insolvency, larger property–liability insurers are less likely to be subject to regulatory action when they are regulated by a single-state regulator. He finds no such evidence when larger insurers are regulated in multiple states and considers this evidence to be consistent with Laffont and Martimort’s regulatory separation hypothesis. Grace et al. (2003) investigate the costs of insolvency resolution and find these costs to be higher for insurers regulated by a single-state, which also supports greater forbearance by single-state regulators. In a study of insolvent insurer liquidations, Leverty and Grace (2004) do not find single-state regulation to be a significant factor, however.

Acharya (2003) proposes an alternative model specific to international banking systems in which central banks coordinate bank capital requirements across borders, but do not coordinate in other policy areas such as bank closures in the event of insolvency. He shows that this asymmetric coordination leads to competition between central banks, which results in “regression toward the worst forbearance” with respect to bank closure policies.

Following the earlier work of White (1994) and Acharya (2003), Dell’Ariccia and Marquez (2006) develop an elegant model of competing, independent bank regulators in which the authors specifically consider the incentives for these regulators to form a regulatory union to set uniform solvency standards. While they initially model a two-nation banking system with two regulators, they then generalize their analysis to address the cases of multiple countries and of home and host country regulation. They specifically note that the implications of their model also should apply in a single economy where multiple regulators compete, such as the US banking industry, in which banks have choices of state or national regulation and several oversight agencies. While US-domiciled insurers do not have a federal option, they do have the ability to choose among 50 state regulators as their primary regulator because they can switch domiciles at relatively low cost. We consequently expect the implications of the Dell’Ariccia and Marquez model to apply to the US insurance market as well as, if not better than, the US banking market.

The essence of the Dell’Ariccia and Marquez model is that, first, domestic regulators cannot internalize the spillover effects generated by setting stricter standards in their home markets and, second, if they are concerned about the owners of domestic financial institutions, regulators are likely to relax standards to increase the profitability of the domestic institutions. This ultimately can lead to a race to the bottom between domestic regulators and their external competitors as they implement increasingly lax standards. Dell’Ariccia and Marquez suggest that this race will be particularly strong when producers can change their domiciles simply by moving their headquarters, a condition quite applicable to the US insurance industry.

We note that whether the relaxation of standards by local regulators truly benefits domestic producers and owners is not as relevant as the collective effect of regulatory competition on all producers and their owners that results in the ultimate “competition in laxity.” When this happens, producers subject to greater regulatory competition should reap benefits, such as profits, that may otherwise accrue to other claimants in the economic system, such as depositors and policyholders.

3. The US life-health insurance regulatory system

Regulation of the US insurance industry by individual state regulators has been a contentious issue even prior to 1868 when the
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