THE CONVERGENCE OF INSURANCE WITH BANKING AND SECURITIES INDUSTRIES, AND THE LIMITS OF REGULATORY ARBITRAGE IN FINANCE

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This Article examines the regulatory challenges raised by recent, overlooked changes in insurance markets that have led to a functional convergence between insurance and the broader financial sector.

The law literature on financial regulation last addressed the issue of convergence over a decade ago, before the latest generation of market innovation and at a time when concern over systemic stability was not at the forefront. This Article revisits the convergence phenomenon in the context of insurance, and does so by applying an analytical framework that distinguishes between two "boundary problems" that accompany all financial regulation. One problem concerns jurisdictional boundaries: to what degree does market integration require that diverse regulations be harmonized across jurisdictions? The other relates to definitional boundaries: within a given jurisdiction, how should

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distinctions be drawn among financial products or firms that have come to perform similar economic functions?

Applying this framework leads to two conclusions that are in tension with the current thrust of policy as well as the literature. First, the Federal Insurance Office established by the Dodd-Frank Wall Street Reform and Consumer Protection Act is inappropriately structured to leverage international harmonization agreements into domestic reforms, whereas the reverse orientation would be more effective. Second, frequent calls for more "functional regulation" fail to appreciate the subtle advantages of retaining formalistic legal definitions, even in the face of increasing economic convergence.

Although this Article explains how the two boundary problems raise distinct sets of policy tradeoffs, at bottom both are a product of the possibility for regulatory arbitrage across jurisdictions or industry definitions, and the potential for a loosely regulated shadow finance sector to arise. Here, insurance is used as a case study for finance in general, to demonstrate that regulatory arbitrage can occur along a surprising number of fronts, which compounds the difficulty of obtaining reliable ex ante estimates of a proposed financial regulation's effects.

I. INTRODUCTION

The downfall of insurance giant American International Group, Inc. ("AIG") during the height of the global financial crisis in September of 2008 has been well documented.[1] The proximate cause of AIG's collapse was the losses taken on by its Financial Products unit, known as AIGFP, which had insured the potential downside of various mortgage-related securities by selling credit default swaps with a notional

[1] *See, e.g.*, Pam Selvarajah, *The AIG Bailout and AIG's Prospects for Repaying Government Loans*, 29 REV. BANKING & FIN. L. 363 (2010).

value of roughly $527 billion.[2] Although AIG was one of the most high profile firms to resort to an emergency bailout by the federal government,[3] it is typically seen as an idiosyncratic example of a Too Big to Fail institution. According to then-Federal Reserve Chairman Ben Bernanke, AIG was a wayward insurance company that was toppled along with the big banks because it had somehow managed to be infiltrated by what was essentially a runaway hedge fund in AIGFP.[4]

This Article explains that, contrary to this conventional wisdom, AIG was not in fact a rogue risk-taker in an otherwise staid insurance industry, which was busy minding the predictable stream of accidents to property, life, and limb. Instead, AIG exemplifies the far edge of an industry-wide transformation that has taken place in the past decade or so, in which insurance companies have come to serve a role that is economically similar to that of other financial institutions such as banks and securities firms. This trend of convergence has proceeded first at the product level where, along with AIG, many other insurers have begun to sell insurance policies that are tied to the value of the stock market, mortgages, or mortgage-related derivatives, all of

2 Am. Int'l Grp. Inc., Annual Report (Form 10-K) (Feb. 28, 2008), at 122, http://www.aig.com/Chartis/internet/US/en/2007-10k_tcm3171-440886.pdf [http://perma.cc/VV8F-LYY2] [hereinafter AIG 2007 Annual Report].

3 *See* William K. Sjostrom Jr., *The AIG Bailout*, 66 WASH. & LEE L. REV. 943, 963–77 (2009) (detailing the rescue of AIG administered by the federal TARP program and lending facilities of the Federal Reserve Bank of New York).

4 *See* Brady Dennis, *Bernanke Blasts AIG for "Irresponsible Bets" that Led to Bailouts*, WASH. POST (Mar. 4, 2009), http://www.washingtonpost.com/wp-dyn/content/article/2009/03/03/AR2009030303810_pf.html [http://perma.cc/57PY-HSXS] ("[AIGFP] was a hedge fund, basically, that was attached to a large and stable insurance company."); *see also* Eric Dinallo, Opinion, *What I Learned at the AIG Meltdown*, WALL ST. J. (Feb. 2, 2010), http://www.wsj.com/articles/SB10001424052748704022804575041283535717548 [http://perma.cc/QT3J-6384] (reflecting a similar view in an op-ed by Eric Dinallo, the New York Insurance Commissioner at the time).

which essentially function as put options on housing prices or other macroeconomic variables.[5] And, primarily as a result of growing lines of business in non-traditional insurance products, functional convergence has also occurred at the firm level. Insurance companies are now sufficiently interconnected with banks and other financial intermediaries that, like AIG, they produce and are susceptible to systemic risks affecting the stability of the entire financial sector.[6]

Apart from AIG's colorful demise, legal scholarship addressing the financial crisis ("2008 Crisis") has been slow to examine the implications of the insurance industry's wave of convergence with the banking and securities sectors.[7] The general topic of financial convergence has also not received scholarly notice since the late 1990s, a time when the primary issues related to the efficiency gains obtainable from merger activity and the formation of conglomerates, rather

5 *See* VIRAL V. ACHARYA ET AL., REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE 257 (2011) (analogizing these insurance policies to puts).

6 *See* Martin Eling & David Pankoke, *Systemic Risk in the Insurance Sector—What Do We Know?* 27–31 (U. St. Gallen, Working Paper No. 22, 2012), http://www.ivw.unisg.ch/~/media/internet/content/dateien/instituteundcenters/ivw/wps/wp124.pdf [http://perma.cc/5ELF-JYZC] (reviewing the growing econometric literature).

7 AIG-as-outlier is the standard view in the law literature. *See, e.g.*, Elizabeth Brown, *Will the Federal Insurance Office Improve Financial Regulation?*, 81 U. CONN. L. REV. 551, 551–52 (2013) ("[I]nsurance is the financial services sector that seems to have performed the best during the financial crisis . . . ."); Jeffrey E. Thomas, *Insurance Perspectives on Federal Financial Regulatory Reform*, 55 VILL. L. REV. 773, 773–76 (2010) (defending the proposition that "[i]nsurance was not involved in the financial crisis"); INT'L ASS'N FOR THE STUDY OF INS. ECON., INSURANCE REGULATION: REFLECTIONS FOR A POST-CRISIS-WORLD 2 (2012) ("The insurance industry proved to be extremely resilient during the recent crisis and hence should be more a source of positive examples and solutions for other industries rather than be subject to regulatory rules invented for different institutions and industries such as banking.").

than current concerns over financial stability.[8] This gap in the law literature is especially glaring, given that significant portions of the sweeping regulatory reforms developed in response to the 2008 Crisis relate to insurance. Domestically, the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank")[9] established the Federal Insurance Office ("FIO"), the first federal agency concerned specifically with insurance.[10] In addition to Dodd-Frank's overhaul of domestic financial regulation, an international tier of reform—coordinated by institutions such as the G-20 and the International Association of Insurance Supervisors ("IAIS")—also grew out of the 2008 Crisis, and includes a number of initiatives to renovate the cross-border regulation of insurance.[11] Importantly, the policy responses at both tiers represent first steps that leave the regulatory status quo for insurance largely intact, while at the same time creating institutional pathways for more ambitious reforms.

This Article examines these economic and regulatory changes in insurance by applying an analytical framework

8 *See, e.g.*, Jonathan R. Macey, *The Business of Banking: Before and After Gramm-Leach Bliley*, 25 J. CORP. L. 691, 691–95 (2000) (analyzing the earlier convergence trend against the backdrop of the Grimm-Leach-Bliley Act); Douglas P. Faucette, *The Impact of Convergence and the Gramm-Leach Bliley Act on the Insurance Industry*, 8 GEO. MASON L. REV. 623, 624–25 (2000) (same); Lissa L. Broome & Jerry W. Markham, *Banking and Insurance: Before and After the Gramm-Leach Bliley Act*, 25 J. CORP. L. 723, 770–76 (2000) (same); Howell Jackson, *Regulation in a Multi-Sectored Financial Services Industry: An Exploratory Essay*, 77 WASH. U. L.Q. 319, 320–22 (1999) (exploring issues raised by regulations that delineate different financial services sectors).

9 Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010) [hereinafter Dodd-Frank].

10 *See* FED. INS. OFFICE, HOW TO MODERNIZE AND IMPROVE THE SYSTEM OF INSURANCE REGULATION IN THE UNITED STATES 2–3 (2013) [hereinafter FIO MODERNIZATION REPORT].

11 *See, e.g.*, INT'L ASS'N OF INS. SUPERVISORS, GLOBAL SYSTEMICALLY IMPORTANT INSURERS: POLICY MEASURES (July 18, 2013); INT'L ASS'N OF INS. SUPERVISORS, FOLLOW-UP RESPONSE TO THE G20 WASHINGTON ACTION PLAN (Feb. 13, 2009), http://iaisweb.org/index.cfm?event=openFile&nodeId=34039 [http://perma.cc/PB36-HMYG] [hereinafter IAIS, G20 RESPONSE].

organized around the two "boundary problems" that raise "a number of fundamental, generic issues relating, at all times and everywhere (almost) to financial regulation."[12] Every substantive financial regulation entails underlying boundaries that delineate how widely it is to be applied, which can be broken down along two legal dimensions.[13] One dimension is jurisdictional: in which set of jurisdictions will the legal rule at issue be imposed? Jurisdictional boundaries raise the question of determining the proper balance between regulatory competition, which allows for diverse rules among jurisdictions, versus regulatory harmonization, which ensures that uniform rules apply across jurisdictions. A second dimension is definitional: within a given jurisdiction, which entities and products will be subject to the legal rule? Here, the issue is identifying the degree to which regulatory categories should be drawn to map onto a firm or product's technical legal form rather than its underlying economic function.

Each type of boundary gives rise to a common regulatory "problem" because—to the extent that a regulation is effective—financial returns achievable within the regulatory boundary are likely to fall relative to those available from similar activities outside the boundary.[14] This will encourage financial activity to flow across the boundary from the well-

12 MARKUS BRUNNERMEIER ET AL., CTR. FOR ECON. POLICY RESEARCH, THE FUNDAMENTAL PRINCIPLES OF FINANCIAL REGULATION 67 (2009); *see also* Charles Goodhart, *The Boundary Problem in Financial Regulation*, NAT'L INST. ECON. REV., Oct. 2008, at 48 (providing an earlier discussion of the "boundary problem" concept).

13 A basic contribution of this Article is to divide the boundary problem into distinct legal dimensions and analyze the unique sets of policy tradeoffs that they raise, which Goodhart and his co-authors do not do. *See* Goodhart, *supra* note 12.

14 "Effective" in the sense that the regulation forces market participants to internalize the social costs of their activities, which were previously borne by third parties. Thus, the problem is fundamental because it reaches optimally designed regulations that are economically efficient, not just wasteful ones.

regulated to the less-regulated sector.[15] Although the two boundary problems theoretically apply to all regulation, the dilemmas they present are particularly acute with regard to finance, where activity can flow across regulatory boundaries with impressive ease. Financial assets can be transferred from one jurisdiction to another with a keystroke, and the economic functions that financial firms or products perform are highly malleable and can be re-engineered to evade the legal categories that were intended to apply to them. The convergence phenomenon further compounds this dilemma, because it increases the integration of financial markets across jurisdictions and blurs prior categorical distinctions between financial services.

Insurance poses an intriguing case of the jurisdictional boundary problem. The jurisdictional boundaries of insurance regulation are now under increasing pressure, because they are substantially more decentralized than those governing other financial industries with which insurance has now converged. In the United States, insurance stands alone in being exclusively regulated at the state level, whereas expansive federal regulation has been imposed on essentially all other financial services since the New Deal era.[16] At the international level, regulatory cooperation relating to insurance is also markedly less developed than it is for banking and securities markets, which have been subject to deeper and longer-running agreements that harmonize regulations across countries.[17] Now that insurance can generate systemic risks affecting the financial sector that are national or even global in scale, the extent to which its uniquely balkanized jurisdictional boundaries should be retained is an unavoidable question.

The analysis of jurisdictional boundaries turns on striking the right balance between regulatory competition and harmonization. Although these alternate approaches

15 *See* Goodhart, *supra* note 12, at 48.

16 *See infra* Part III.A.

17 *See infra* Part III.B.

present familiar theoretical tradeoffs,[18] when carefully applied to the insurance context they provide significant implications for both policy and the literature. At the domestic level, it is clear that the current state-centered jurisdictional boundaries are incompatible with the insurance industry's integration with national financial markets. There should therefore be a substantial shift towards harmonization, in particular through federalization of solvency regulation for insurers.[19] In contrast, there is a strong case for retaining a greater degree of regulatory competition at the international level, where enforcement and information-scarcity issues unique to international jurisdictional boundaries mitigate the benefits of regulatory harmonization and exacerbate its costs.[20] A policy implication is that Dodd-Frank's new FIO should prioritize domestic harmonization of solvency rules such as capital requirements, rather than use its authority to negotiate international agreements as a tool to indirectly bind states. This conclusion is in conflict with the current design of the FIO, which is structured to take an international-first

18 On one hand, regulatory competition may encourage jurisdictions to engage in policy experimentation and provide opportunities for exit that reduce the costs of regulatory failure. On the other hand, regulatory competition can potentially generate inter-jurisdictional externalities or spark a race-to-the-bottom dynamic that only harmonized rules across jurisdictions can prevent.

19 This Article considers a range of harmonization models that have been proposed and suggests a mixed approach that carves out solvency rules for federal regulation while leaving so-called marked conduct regulation to the states. *See, e.g.*, SHEILA BAIR, UNIV. MASS. ISENBERG SCH. OF MGMT., CONSUMER RAMIFICATIONS OF AN OPTIONAL FEDERAL CHARTER FOR LIFE INSURERS (2004) (concluding that the federal government should impose regulations to improve life insurance and not leave the area up to states); Henry N. Butler & Larry E. Ribstein, *A Single-License Approach to Regulating Insurance* (Northwestern Univ. Sch. of Law, Working Paper No. 154, 2008), http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1153&context=facultyworkingpapers [http://perma.cc/6LSC-YAEE] (promoting minimal federal intrusion into insurance markets and instead allowing states to charter insurers).

20 *See infra* Part IV.A.2.

approach, as well as commentary that regards this as a positive institutional feature.[21]

The definitional boundaries of insurance regulation introduce serious policy dilemmas as well. The trend towards convergence creates pressure on traditional regulatory definitions that trigger an idiosyncratic set of rules for those financial firms and products that fall within the boundary that demarcates "insurance." In theory, the need for regulatory definitions to track the economic characteristics of the activities to which they are applied appears self-evident, and is the impetus behind perennial calls for more "functional regulation." When employed in practice, however, functional categories can be over-inclusive and contribute to excessive regulatory complexity. They may also spark an unwinnable race between regulators reacting to market innovations and financial engineers seeking to evade the latest generation of functional definitions.[22] Thus, this Article argues that even in the face of increasing convergence, demonstrating a clear economic analogy between financial services is insufficient to justify a move to functional definitional boundaries, and it is often more efficient to retain formal legal categories.

Two examples of the virtues of formal definitions concern regulations that distinguish between credit default swaps and bond insurance,[23] and between certain insurance annuities and mutual fund instruments.[24] Despite

21 *See, e.g.*, Brown, *supra* note 7, at 583. The conclusion also runs counter to a common instinct to respond to market failures, such as those revealed by the 2008 Crisis, by seeking greater regulation at each level of the jurisdictional hierarchy (state, national, and international).

22 *See infra* Part IV.B.1.

23 *See* M. Todd Henderson, *Credit Derivatives are not "Insurance"*, 16 CONN. INS. L.J. 1, 1–4 (2009); Arthur Kimball-Stanley, *Insurance and Credit Default Swaps: Should Like Things Be Treated Alike?*, 15 CONN. INS. L.J. 241, 241–43 (2008).

24 *See* Russell Hasan, *Annuity Coeptis: Is There a Way to Avoid* American Equity Investment Life Insurance Co. v. SEC *Becoming a Herald for the SEC Gaining Regulatory Control Over All Securities-Related Insurance Products?*, 17 CONN. INS. L.J. 253, 267–68, 285 (2010).

substantial functional similarities in both cases, attempts to redraw definitional boundaries to provide the same treatment for each pair of products implicate many of the weaknesses of the functional approach. Firm-level distinctions that pursue a functional approach to categorizing "insurers" can also be problematic. One illustration is the so-called Collins Amendment to Dodd-Frank, which provides regulators with discretion to erase formal boundaries between Too Big to Fail insurers and banks for purposes of capital requirements.[25] Although this Article concludes that exercising such discretion pursuant to the Collins Amendment would push functionalism too far, it also argues that the unique treatment of insurers relative to other financial firms should be revisited in other areas, such as accounting standards and the role of credit ratings agencies.[26]

As described above, the two boundaries raise distinct sets of policy tradeoffs but share the common underlying problem of which concerns the potential for regulatory arbitrage:[27] exactly how easy is it for financial activity to migrate across jurisdictional and definitional boundaries to enjoy less effective regulation? Policy evaluation is simplified by adopting a working assumption that the scope for regulatory arbitrage in finance is limited, but recent experiences indicate that in some cases it can be quite broad. One dramatic episode involving definitional boundaries is the rise of shadow banking in recent decades, during which time a substantial portion of the financial sector migrated from traditional banks to entities and markets not subject to

25 Dodd-Frank § 171, 12 U.S.C. § 5371 (2012).

26 *See* John Patrick Hunt, *Credit Ratings in Insurance Regulation: The Missing Piece of Financial Reform*, 68 WASH. & LEE L. REV. 1667, 1670–71 (2011); Viral V. Acharya et al., *On the Financial Regulation of Insurance Companies* (N.Y.U. Stern Sch. of Bus., Working Paper, 2009), http://web-docs.stern.nyu.edu/salomon/docs/whitepaper.pdf [http://perma.cc/B5LF-PAV4] (analyzing accounting standards that apply to insurance companies).

27 *See* Victor Fleischer, *Regulatory Arbitrage*, 89 TEX. L. REV. 227, 230–31 (2010).

formal banking regulation.[28] An even more recent (and largely unnoticed) illustration of regulatory arbitrage across jurisdictional boundaries is the rapid development of a "shadow insurance" sector in the United States, wherein a few states have attracted a disproportionate number of insurers by aggressively reducing solvency requirements.[29]

These observations lead to a final policy point regarding financial regulation as a whole. Specifically, this Article suggests that uncertainty over the scope of regulatory arbitrage is the most compelling ground for skepticism that mandating federal agencies to engage in rigorously quantitative cost-benefit analysis ("CBA") for financial regulation will yield meaningful results.[30] To be sure, this is not to say that the Kaldor-Hicks efficiency standard implicit in CBA is an improper criterion for evaluating policy.[31] Rather, the claim is that in practice, requiring a formal CBA process for financial agencies will constitute a mere procedural hurdle that will not materially improve the precision of regulatory outputs.[32]

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28 *See* Jonathan Macey, *It's All Shadow Banking, Actually*, 31 REV. BANKING & FIN. L. 593, 593–94 (2011); ZOLTAN POSZAR ET AL., FED. RESERVE BANK OF N.Y., STAFF REPORT NO. 458, SHADOW BANKING (2010).

29 *See* RALPH S.J. KOIJEN & MOTOHIRO YOGO, FED. RESERVE BANK OF MINNEAPOLIS, SHADOW INSURANCE (2010); BENJAMIN M. LAWSKY, N.Y. STATE DEP'T FIN. SERVS., SHINING A LIGHT ON SHADOW INSURANCE (2013).

30 *See* Eric Posner & E. Glen Weyl, *Benefit-Cost Paradigms in Financial Regulation*, 43 J. LEG. STUD. S1 (2014) (defending the proposal); John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications*, 124 YALE L.J. 882, 885–89 (2015) (providing a critique).

31 The Kaldor-Hicks criterion is a concept from welfare economics that calls for a ranking of outcomes by the degree to which they maximize aggregate social welfare. Kaldor-Hicks is less restrictive than the Pareto criterion because it allows interpersonal losses or gains in welfare to offset one another. *See* Eric Posner & Matthew D. Adler*, Rethinking Cost-Benefit Analysis*, 109 YALE L.J. 165, 190–91 (1999) (explaining the traditional role of Kaldor-Hicks as philosophical justification for CBA).

32 Some support for this point can be drawn from a recent case concerning the Commodity Futures Trading Commission's ("CFTC") rulemaking for derivatives. There, the district court found that the CFTC

Regardless of the limitations of quantitative CBA as an administrative procedure, however, awareness of the tradeoffs implied by the two boundary problems is a prerequisite for any balanced inquiry into what steps may be taken to provide regulation conducive to a more efficient and stable insurance sector and financial system. Sensitivity to these tradeoffs also reveals that blanket calls for more or less regulation of finance are overly simplistic and can lead to indeterminate results when applied. This is because "regulation" is not a homogenous variable that is either dialed up or down. Its internal structure matters and, as this Article shows, applying seemingly more demanding rules within one boundary may produce less stringent regulation overall.

The Article proceeds as follows. Part II examines in detail the economic convergence of the insurance industry with the broader financial sector. Part III provides an overview of the structure of insurance regulation, both domestic and international, as it has evolved since the 2008 Crisis. To the extent that the characterizations of these economic and regulatory developments are familiar or accepted as a premise, the reader may proceed directly to the subsequent sections. Part IV.A presents the analysis of the jurisdictional boundary problem and explains its significance for understanding the FIO's role in insurance regulation. Part IV.B turns to the definitional boundary problem and its application to insurance products and firms. Part V discusses the implications of the preceding boundary problem analysis for understanding the limits of regulatory arbitrage in finance and for evaluating the emerging debate over proposals to require federal agencies to apply quantitative cost-benefit analysis to financial regulations. Part VI briefly concludes.

was required to perform a CBA and failed to sufficiently do so, yet kept the regulation in place because "the Court is willing to assume for now that the agency's error was one of form and not of substance." Sec. Indus. & Fin. Mkts. Ass'n v. CFTC, 67 F. Supp. 3d 373, 435 (D.D.C. 2014).

II. THE CONVERGENCE OF INSURANCE WITH OTHER FINANCIAL SERVICES

Recognizably modern insurance appeared in the eighteenth century following Bernoulli's development of the law-of-large-numbers—the idea that the incidence of idiosyncratic, individual risks will tend toward a predictable average once those risks are pooled in sufficiently large amounts.[33] Insurance can therefore allow risk-averse individuals to transfer, for a price, the cost of their accidents to a common insurer that is effectively rendered risk-neutral through the diversification of policies.[34] Insurance policies cover a wide range of risks but share a common legal feature in that they consist of contracts that give rise to contingent liabilities: the insurer is liable to the insured only if the relevant accidents covered by the policy actually occur.[35] Another traditional legal feature of insurance contracts is that the insurer's contingent liability relates to the risk that an accident affects an "insurable interest" of the insured; in other words, policies are typically limited to covering the cost of accidents that are suffered by the policyholder rather than third parties.[36]

Traditional forms of insurance are distinguishable from the services provided by banks, securities firms, or other financial intermediaries. Non-insurance financial institutions typically provide risk intermediation by matching the assets of savers with investors.[37] In contrast to insurance, most financial products provide a return to the

33 *See* Ronen Avraham, *The Law and Economics of Insurance Law—A Primer* (Univ. Tex. Sch. of Law, Law & Econ. Research Paper No. 224, 2012), http://ssrn.com/abstract=1822330 [http://perma.cc/533S-L7F5].

34 *See id.* at 10–12; ACHARYA ET AL., *supra* note 5, at 241.

35 Jackson, *supra* note 8, at 330.

36 *See* Avraham, *supra* note 33, at 43; INT'L ASS'N INS. SUPERVISORS, INSURANCE AND FINANCIAL STABILITY 11 (2011), http://iaisweb.org/index.cfm?event=openFile&nodeId=34379 [http://perma.cc/3DSE-27TS] [hereinafter IAIS, FINANCIAL STABILITY].

37 *See* FREDERIC MISHKIN, THE ECONOMICS OF MONEY, BANKING, AND FINANCIAL MARKETS 22–24 (11th ed. 2016).

saver that is related to the investment performance of the underlying assets rather than contingent on the occurrence of an unrelated accident.[38] A further distinction is that the return on investments usually involves risks relating to movements in asset prices and developments in the macroeconomy that are arguably less susceptible to the law-of-large-numbers than are risks to property or health.[39] A final important difference is that insurance firms have a funding structure that is inverted relative to that of banks and other bank-like entities.[40] An insurance company's balance sheet consists of short-term liquid assets, derived from policy premiums that are paid upfront, while its liabilities are long-term and relatively illiquid future claims owed to policyholders.[41] Banks, on the other hand, have short-term liquid liabilities in the form of deposits that can be withdrawn on demand, and long-term illiquid assets that take the form of loans to consumers and businesses.[42]

The cumulative result of these differences is that banks are traditionally affected by economic fluctuations associated with the business cycle to a much greater extent than are insurers. During an economic downturn, the value of banks' assets becomes more uncertain, and banks' transformation of short-term deposits to long-term illiquid loans can mean that they are susceptible to runs by depositors.[43] Bank failures, in turn, restrict the availability of credit to businesses and consumers, which can further depress economic activity and

38 *See* Jackson, *supra* note 8, at 325–31.

39 *See* ACHARYA ET AL., *supra* note 5, at 252; *see also* IAIS, FINANCIAL STABILITY, *supra* note 36, at 11.

40 *See* Macey, *supra* note 28, at 603–04 (arguing that many financial entities, particularly those in the shadow banking sector, share a common funding structure with banks).

41 *See* ACHARYA, *supra* note 5, at 251–52; IAIS, FINANCIAL STABILITY, *supra* note 36, at 6–10.

42 *See* MISHKIN, *supra* note 37, at 213–17; ACHARYA ET AL., *supra* note 5, at 251–52; Macey, *supra* note 28, at 601–03.

43 *See* MISHKIN, *supra* note 37, at 213–17 (describing the logic of bank runs); ACHARYA ET AL., *supra* note 5, at 252.

exacerbate a recession.[44] For these reasons, the history of financial crises has featured banks as protagonists while leaving insurers more or less off stage.[45]

This Part II will argue that, over the past decade or so, these distinctions between insurance and other financial services have broken down. Part II.A explains how the products and services offered by insurance companies are converging with those that have typically been provided by banks and securities firms. Part II.B describes how the insurance firms have grown increasingly interconnected with other financial intermediaries, and the new entanglement of the insurance industry with systemic risk and financial stability that has resulted. The convergence of insurance products and firms with the broader financial system is important because it puts immense pressure on the regulatory regime for insurance, which has always treated the industry as unique and separate from the rest of finance. It therefore presents a case that puts the boundary problems embedded in all financial regulation in plain view.

A. Convergence of Products: Non-Traditional Insurance Products

Across all lines of insurance, insurance companies now provide products that have economic functions similar to those traditionally associated with other financial industries. Life insurers, for example, sell Guaranteed Investment Contracts ("GICs"), pursuant to which the insured places funds with the insurance company in return for repayment

44 *See* CARMEN M. REINHART & KENNETH S. ROGOFF, THIS TIME IS DIFFERENT: EIGHT CENTURIES OF FINANCIAL FOLLY (2009) (providing historical evidence that recessions triggered by financial crises tend to be particularly severe).

45 *See generally* CHARLES P. KINDLEBERGER & ROBERT ALIBER, MANIAS, PANICS, AND CRASHES: A HISTORY OF FINANCIAL CRISES (5th ed. 2005) (providing the seminal history of financial crises, with insurance companies notably absent); *see also* Faisal Baluch, Stanley Mutenga & Chris Parsons, *Insurance Systemic Risk and the Financial Crisis*, 36 GENEVA PAPERS ON RISK & INS. 126–28 (2011).

of interests at a guaranteed rate.[46] For some varieties of GICs, the principal invested may be called with very short notice, thus mirroring the run-prone characteristics of bank deposits.[47] Life insurance companies also sell annuities that can function similarly to mutual fund products provided by investment firms. Although insurers first began to sell variable annuities decades ago, the volume sold grew rapidly during the last business cycle, with assets under management for variable annuities accounts in the United States increasing nearly 100 percent from 2002 to their peak of $1.5 trillion in 2007.[48] Fixed-indexed annuities, which provide policyholders with a guaranteed minimum stream of payments based on the performance of a reference market index, first appeared in 1995 and have since boomed in popularity as well.[49] The minimum guarantees embedded in annuity products expose life insurers to substantial financial market risks, namely downward fluctuations in the stock market, which proved disastrous during the 2008 Crisis.[50]

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46 *See* Peter J. Wallison, *Convergence in Financial Services Markets: Effects on Insurance Regulation*, *in* THE FUTURE OF INSURANCE REGULATION IN THE UNITED STATES 167, 179–85 (Martin F. Grace & Robert W. Klein eds., 2009).

47 *Id.* at 179–82.

48 *See* Lukas Junker & Sirus Ramezani, *Variable Annuities in Europe after the Crisis: Blockbuster or Niche Product?* 1 fig.1 (McKinsey & Co., Working Papers on Risk No. 19, 2010), http://www.mckinsey.com/~/media/McKinsey/dotcom/client_service/Risk/Working%20papers/19_Variable_annuities_in_europe_after_crisis.ashx [http://perma.cc/Y75U-PGZ5].

49 *See* NAT'L ASS'N INS. COMM'RS, BUYER'S GUIDE FOR FIXED DEFERRED ANNUITIES 2 (2013), http://www.naic.org/documents/prod_serv_consumer_anb_le_2013.pdf [http://perma.cc/L56Z-89KR] (defining fixed indexed annuities); Jack Marrion, *Fixed Indexed Annuities Celebrate 20 Years*, ANNUITY OUTLOOK (Jan. 2015), http://annuityoutlookmagazine.com/2015/01/fixed-indexed-annuities-celebrate-20-years/ [http://perma.cc/MU77-37BQ] (noting 1995 emergence and subsequent popularity of fixed indexed annuities).

50 *See* ACHARYA ET AL., *supra* note 5, at 254–57; Sebastian Schich, *Insurance Companies and the Financial Crisis*, OECD J.: FIN. MKT. TRENDS, Oct. 2009, at 1, 11; Junker & Ramezani, *supra* note 48, at 1 (finding that, between October 2007 and March 2009, six of the ten largest

Property and casualty insurers also now offer products that compete with those sold by banks and securities firms. One longstanding example is the surety bond, which insurance companies generally sell in connection with construction projects. A surety bond insures the financial risk that a particular bonded contractor will fail to satisfy its contractual commitments, and functions similarly to commercial loans offered by banks such as stand-by letters of credit.[51] Insurance companies selling surety bonds were exposed to the latest business cycle, which had large effects on the markets for commercial real estate and publicly funded construction.[52] A more dramatic example of market convergence is "insurance-linked securities" ("ILS"), originally developed in the mid-1990s. With ILS, an insurer creates a special purpose vehicle to issue securities that are backed by collateral derived from premium payments on a pool of individual insurance policies.[53] By transforming individual insurance policies into securities, ILS such as catastrophe bonds (or "Cat bonds") allow insurance companies to bypass traditional reinsurance relationships and directly access capital markets.[54] In the process, ILS make insurers' source of funding subject to the vicissitudes of financial markets in a way that traditional reinsurance contracts do not.[55]

publicly listed variable annuity issuers in the United States lost approximately ninety percent of their market capitalization).

51 *See* Wallison, *supra* note 46, at 185.

52 *See* AON, 2013 SURETY MARKET UPDATE 4 (2013), http://www.aon.com/attachments/risk-services/2014-Surety-Market-Update-Final.pdf [http://perma.cc/23YR-5VHW].

53 *See* PAULINE BARRIEU & LUCA ALBERTINI, THE HANDBOOK OF INSURANCE-LINKED SECURITIES 1–7 (2009).

54 *See* J. David Cummins & Mary A. Weiss, *Convergence of Insurance and Financial Markets: Hybrid and Securitized Risk-Transfer Solutions*, 76 J. RISK & INS. 493, 495 (2009).

55 For example, as a result of the financial crisis, the amount of life insurance ILS issued fell from $6 billion in 2007 to $100 million in 2008. *See* Faith R. Neal et al., Insurance and Interconnectedness in the Financial Services Industry 5 (Aug. 2012) (unpublished annual meeting

A specialized form of property and casualty insurance is private mortgage insurance.[56] Private mortgage insurers sell policies to mortgage originators or private homeowners that insure against the risk of mortgage default, particularly for riskier mortgages with high loan-to-value ratios.[57] Although it is several decades old, the private mortgage industry rapidly expanded as the housing bubble inflated, with premiums written growing from $2.3 billion in 1996 to $4.2 billion in 2007.[58] Policies that back the viability of mortgages do not relate to actual physical accidents to property the way that homeowners insurance does; instead, mortgage insurance functions like a put option on what turns out to be highly cyclical asset.[59] When housing prices began to plummet in 2006, the rate of mortgage defaults soared and caused leading private mortgage insurers—such as MGIC, PMI, Inc., and Radian Group—to lose billions or fail outright.[60]

paper), http://www.aria.org/meetings/2012%20Meetings/1F-Interconnectedness%20.pdf [http://perma.cc/V4KU-G2WG].

56 *See generally* THOMAS N. HERZOG, HISTORY OF MORTGAGE FINANCE WITH AN EMPHASIS ON MORTGAGE INSURANCE (2009), https://soa.org/library/monographs/finance/housing-wealth/2009/september/mono-2009-mfi09-herzog-history.aspx [https://perma.cc/M4TS-U2UC].

57 *See* Schich, *supra* note 50, at 8–9; ACHARYA ET AL., *supra* note 5, at 254.

58 HERZOG, *supra* note 56, at 55.

59 *See* Edward Leamer, *Housing* is *the Business Cycle* 7 (Nat'l Bureau of Econ. Research, Working Paper No. 13428, 2007), https://www.kansascityfed.org/publicat/sympos/2007/pdf/leamer_0415.pdf [http://perma.cc/A4U4-M4XQ].

60 *See* ACHARYA ET AL., *supra* note 5, at 254–56; Jonathan Stempel & Ben Berkowitz, *UPDATE 3-Mortgage Insurer PMI Group files for Bankruptcy*, REUTERS (Nov. 23, 2011), http://www.reuters.com/article/2011/11/23/pmigroup-idUSN1E7AM19I20111123 [http://perma.cc/E7CG-M8XF]; *see also* FED. INS. OFFICE, ANNUAL REPORT ON THE INSURANCE INDUSTRY 34 (2013), http://www.treasury.gov/initiatives/fio/reports-and-notices/Documents/2014_Annual_Report.pdf [http://perma.cc/7YM8-R8GD] [hereinafter FIO 2013 REPORT] ("In 2000, eight companies comprised the mortgage guaranty insurance industry. Of these, five companies continue to write PMI and three are in run-off or receivership.").

Another relevant line of property and casualty policies were sold by "monoline" insurers established during the 1970s and 1980s, which were so called because they exclusively sold financial guarantee insurance against the default on low-risk municipal bonds.[61] Starting in the late 1990s, monolines expanded their business to provide guarantees on bonds created from securitized pools of mortgages, known as residential mortgage-backed securities ("RMBS").[62] Because RMBS provide investors with a fixed stream of payments derived from interest payments on the underlying pool of mortgage loans, their value is sensitive to default rates on those loans. Thus, albeit indirectly, monolines that "wrapped" RMBS with bond insurance were also writing put options on the housing boom and accompanying business cycle. As the burst of the housing bubble was transmitted to RMBS markets during 2007, all of the major monoline insurers—Assured Guaranty Ltd., MBIA, Inc., Ambac Financial Group Inc., Syncora Guarantee Inc., Financial Guaranty Ins. Co., and ACA Financial Guaranty Corp.—suffered massive losses on their RMBS insurance portfolios and fell into financial disarray.[63]

Early in the 2000s, monoline insurers also began to issue large amounts of credit default swaps ("CDS"), which are financial instruments that can serve a similar function to bond insurance, although with some technical differences.[64]

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61 Faith R. Neale & Pamela Peterson Drake, Financial Guarantee Insurance: Arrogance or Ignorance in an Era of Exuberance 3 (Aug. 2009) (unpublished working paper), http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.388.2780&rep=rep1&type=pdf [https://perma.cc/W8YB-9CTX]; Sebastian Schich, *Challenges Related to Financial Guarantee Insurance*, OECD J.: FIN. MKT. TRENDS, June 2008, at 81, 90–92.

62 Pamela Peterson Drake & Faith R. Neale, Financial Guarantee Insurance and the Failures of Risk Management 4–6 (Oct. 2010) (unpublished manuscript), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1703602 [http://perma.cc/FNL9-W3KG]; Schich, *supra* note 61, at 90–94.

63 *See* Drake & Neale, *supra* note 62, at 28–32.

64 *See id.* at 10–14; *see also infra* Part IV.B.1.b (explaining the differences between CDS and bond insurance).

Along with banks and hedge funds, monoline insurers competed to sell CDS that insured the downside of RMBS and related securities called collateralized debt obligations ("CDOs").[65] CDOs are produced by a further iteration of the securitization process, in which RMBS are pooled to serve as collateral for a stream of payments owed to holders of CDO certificates.[66] Because the value of CDOs are a function of the RMBS that back them, monolines incurred losses on their CDS portfolios that were just as catastrophic as those stemming from their bond insurance business.[67]

A final form of industry convergence at the product level is reflected in the increasing trend of insurance companies entering into direct competition with banking and securities firms by providing financial services that are not even nominally packaged as "insurance." For example, many life insurance companies have developed securities lending programs that temporarily lend out the insurer's assets to over-the-counter investors for a fee.[68] In addition, insurance companies are increasingly competing with banks by engaging in direct corporate lending and real estate finance.[69] Also notable is the recent entry of insurance companies into the project finance market for infrastructure

65 *See* Drake & Neale, *supra* note 62, at 10–14; *see also infra* Part IV.B.1.b.

66 And, when financial engineers began to develop "CDO-squared" and "CDO-cubed"—CDOs collateralized by other CDOs—monoline insurers sold CDS protection on those derivatives, too. *See* Drake & Neale, *supra* note 62, at 7.

67 *See id.* at 28–32.

68 Life insurers' securities lending activities produced substantial losses during the 2008 Crisis. *See* NAT'L ASS'N INS. COMM'RS, CAPITAL MARKETS SPECIAL REPORT: SECURITIES LENDING IN THE INSURANCE INDUSTRY (2011), http://www.naic.org/capital_markets_archive/110708.htm [http://perma.cc/BC59-WBNY]; Homa Zaryouni, *Securities Lending Leads to Losses in Life*, SNL FINANCIAL (Apr. 23, 2008), http://www.snl.com/interactivex/article.aspx?id=7659789&KLPT=6 [https://perma.cc/7ZHK-LB8V].

69 *See* ALLEN & OVERY LLP, THE FUTURE OF CREDIT 14–17 (2012), http://www.allenovery.com/SiteCollectionDocuments/future-of-credit-2012.pdf [http://perma.cc/6J9U-W2QW].

investments.[70] These and related developments have led commentators to conclude that, "[t]he bottom line of these examples of non-insurance underwritings is that investment insurance groups are acting, and will increasingly act, as shadow banks, since they replace traditional banks as lenders."[71]

In light of the foregoing it should be clear that the conventional picture of AIG as a rogue insurer unexpectedly commandeered by its AIGFP unit is incorrect.[72] Alongside private mortgage insurers, many of which are now bankrupt, AIG's General Insurance unit wrote puts on the housing market by selling financial guarantees on subprime mortgages.[73] In competition with large life insurers, some of which also resorted to Troubled Asset Relief Program ("TARP") funds, AIG sold guaranteed annuities that insured the downside of the stock market, causing its Life Insurance & Retirement unit to report a $19 billion loss in fall of 2008.[74] Likewise, AIG rushed to compete with other life insurers by developing a securities lending program, which was run by its asset management unit, AIG Investments, with disastrous results.[75] And of course, the "hedge fund":

70 STANDARD & POOR'S, OUT OF THE SHADOWS: THE RISE OF ALTERNATIVE FINANCING IN INFRASTRUCTURE, RATINGS DIRECT 4 (2013), http://www.standardandpoors.com/spf/upload/Ratings_EMEA/OutOfTheShadows-TheRiseOfAlternativeFinancingInInfrastructure.pdf?elq=793ced9480bc4db9adaa51e0933d3ed8 [http://perma.cc/8C7B-RH62].

71 David Veredas et al., *Googling Systemically Important Insurers*, VOXEU (Apr. 22, 2013), http://www.voxeu.org/article/googling-systemically-important-insurers [http://perma.cc/D5L7-ZWKP].

72 *See* David J. Merkel, *To What Degree Were AIG's Operating Insurance Subsidiaries Sound?*, THE ALEPH BLOG (Apr. 29, 2009), http://alephblog.com/wp-content/uploads/2009/04/To%20What%20Degree%20Were%20AIG%E2%80%99s%20Operating%20Subsidiaries%20Sound.pdf [http://perma.cc/2KKG-QUYG].

73 *See* AIG 2007 Annual Report, *supra* note 2, at 6.

74 *See* Am. Int'l Grp., Inc., Quarterly Report (Form 10-Q) (Nov. 10, 2008), at 12, http://www.aig.com/Chartis/internet/US/en/Q308_10Q_tcm3171-443302.pdf [http://perma.cc/V4ZV-XF9M] [hereinafter AIG Q3 2008 Quarterly Report].

75 *See* Sjostrom, *supra* note 3, at 961–62.

from January of 2007 to September of 2008, AIGFP's portfolio took on $32.4 billion in losses, largely related to CDS activity, and met the same fate that was visited upon the monoline insurance companies.[76] Thus, far from being an outlier, AIG was an exemplar of the transformational changes that have taken place throughout the insurance industry over the past two decades.

B. Convergence of Firms: Insurance and Systemic Risk

The financial innovation that allowed insurance companies to enter banking and securities markets by selling products with large non-insurance components has increased to a great extent both the interconnection of insurance firms with the financial sector and the fluctuations in the business cycle. As a result, and as a rapidly growing body of econometric research suggests, the insurance industry is now both a potential source and victim of systemic risk and can no longer be ignored when considering regulatory interventions to promote financial and macroeconomic stability.[77] This Part II.B argues that systemic risks originating in the insurance industry can be transmitted to the broader financial sector (and vice versa) through three specific mechanisms: (1) counterparty risk; (2) spillover risk; and (3) information contagion risk.

1. Counterparty Risk

The most obvious source of systemic risk generated by insurance, particularly in light of the 2008 Crisis, is the counterparty risk presented by the liability side of insurance

[76] *See id.* at 946–47 (citing AIG 2007 Annual Report, *supra* note 2, at 36; AIG Q3 2008 Quarterly Report, *supra* note 74, at 12).

[77] The somewhat mixed results of this literature consistently suggest that at least portions of the insurance industry have become systemically risky, and almost uniformly conclude that systemic risk in insurance has at least been *increasing* in recent years due to market convergence. *See* Eling & Pankoke, *supra* note 6, at 10–11, 23–24 (providing a review of the literature).

companies' balance sheets. An insurance company and its policyholder stand as contractual counterparties, each bearing a distinct kind of risk. On the one hand, insurance companies bear the risk that a policyholder will default on premium payments or that moral hazard will induce the insured to take risks not contemplated by the insurance company. On the other hand, a policyholder always bears the risk that, should an event covered under the policy materialize, its insurance company counterparty will not have sufficient resources to pay the claim once it becomes due. Thus, although insurance companies stand as intermediaries to backstop risks, there is an irremovable risk that the insurance backstop itself will fail. When insurance firms are highly interconnected with other financial institutions, counterparty risk can become systemic through a domino effect, in which the default by Insurance Company A on financial obligations to policyholder Counterparty B makes Counterparty B less able to perform on its contractual obligation to Third Party C, and so on.[78]

Traditional insurance does not usually create substantial counterparty risk, for two reasons already mentioned above. First, traditional insurance covers idiosyncratic, non-economic risks made predictable by the law-of-large-numbers.[79] Second, insurers' traditional funding structure is more stable and less susceptible to runs than that of banks.[80] However, now that some insurance companies write large amounts of policies—such as annuities with minimum guarantees, mortgage insurance, and bond insurance—that essentially function as put options on certain macroeconomic variables, they are much more exposed to downswings in the

78 KENNETH FRENCH ET AL., THE SQUAM LAKE REPORT: FIXING THE FINANCIAL SYSTEM 112–13 (2010) [hereinafter SQUAM LAKE REPORT] (describing counterparty risk in the context of CDS); ACHARYA ET AL., *supra* note 5, at 262–63; Markus K. Brunnermeier, *Deciphering the Liquidity and Credit Crunch 2007-2008*, 23 J. ECON. PERSP. 77, 96–99 (2009).

79 *See* Avraham, *supra* note 33, at 9 and accompanying text.

80 *See supra* notes 41–42 and accompanying text.

business cycle. As shown by the 2008 Crisis, insurance generates significant counterparty risk when it evolves from a backstop for the costs of car accidents and heart attacks to a backstop for losses in the housing market, the securitization market, or the stock market.

The collapse of AIG presents the most infamous example of systemically important counterparty risk generated by an insurance company. Although AIG's failure was precipitated by losses that accumulated across a variety of its insurance lines, it was losses on CDS written on CDOs by AIGFP that best illustrates counterparty risk. As the value of CDOs plummeted during the summer of 2008, AIG was obligated to post increasing amounts of liquid collateral on its CDS.[81] When AIG was downgraded by the ratings agencies on September 15, 2008, collateral calls were raised once again, and AIG "had an immediate need for cash in excess of its available liquid resources."[82] In other words, AIG could not meet its counterparty obligations. In response, the federal government rushed to offer AIG a bailout the following night, September 16, based on the perception that if AIG defaulted on its CDS counterparties the consequences could have been devastating for the already fragile and destabilized U.S. and global banking systems.[83]

A lesser known but equally appropriate example of counterparty risk is that of MBIA, Inc. ("MBIA"), a financial guarantor and the world's largest monoline insurer as of 2007. Since being founded in 1973, MBIA's exclusive line of business was selling bond insurance on municipal bonds. Beginning in the late 1990s, however, it also aggressively expanded into financial guarantees on housing-related derivatives by writing billions of dollars of bond insurance and CDS on RMBS and CDOs.[84] After a series of downgrades

81 *See* Sjostrom, *supra* note 3, at 960–61.

82 AIG Q3 2008 Quarterly Report, *supra* note 74, at 50.

83 Matthew Karnitschning, *U.S. to Take Over AIG in $85 Billion Bailout*, WALL. ST. J. (Sept. 17, 2008), http://www.wsj.com/articles/SB122156561931242905 [http://perma.cc/AF6L-U5AC].

84 *See* Drake & Neale, *supra* note 62, at 16–19.

by the ratings agencies in spring and summer of 2008, MBIA's continuing solvency was cast in doubt, raising concerns over whether a potential default on its municipal bond insurance policies would have systemic ripple effects.[85] In order to "[a]ssur[e] counter-party certainty [and] introduce some measure of much-needed confidence and stability" in municipal debt markets, the New York Insurance Department ("NYID") "facilitated and supervised" an emergency restructuring of MBIA on a highly expedited basis.[86] The result was a transformation of the company, approved by the NYID in February of 2009, which split MBIA, Inc. in two and transferred $5 billion of its assets to a new entity that was dedicated to backstopping only municipal bond obligations.[87]

A third example of counterparty risk posed by an insurance company is Swiss Re, an international property and casualty reinsurance conglomerate based in Switzerland. In November of 2007, Swiss Re was forced to write down a $1.1 billion loss as a result of downgrades on RMBS that it had insured by issuing CDS.[88] After purportedly seeking a bailout from the Swiss government in fall of 2008, Swiss Re was only able to stay afloat after receiving an emergency $2.6 billion loan from Warren Buffett's Berkshire Hathaway, which at the time was a

85 *Id.* at 19 ("The concern remain[ed] that MBIA's insurance portfolio, combined with the stress from its CDS exposure, d[id] not provide adequate capital.").

86 Press Release, N.Y. State Ins. Dep't, Department Facilitates, Supervises MBIA Split; Should Add Capacity to Municipal Bond Insurance Market, at 1–2 (Feb. 18, 2009), http://www.dfs.ny.gov/insurance/press/p0902181.htm [http://perma.cc/93NF-AKNA].

87 *See* Letter from David A. Paterson, Governor, N.Y., to Ram Wertheim, General Counsel, MBIA, Inc., at 1–3 (Feb. 17, 2009), http://www.mbia.com/investor/publications/NYIDSignedApprovalLetter.pdf [http://perma.cc/A3V5-PTYD].

88 Julia Werdigier, *Swiss Re Takes $1 Billion Subprime Hit as Crisis Spreads Beyond Banks*, N.Y. TIMES (Nov. 19, 2007), http://www.nytimes.com/2007/11/19/business/worldbusiness/19iht-insure.4.8395025.html [http://perma.cc/54FP-VNLG].

major counterparty of the reinsurer.[89] If any episode can capture the dramatic entry of insurance into the global financial system, surely it is Warren Buffett stepping in for the government of Switzerland to bailout a Swiss property and casualty reinsurer that has been rendered insolvent by adverse developments in U.S. mortgage markets.

2. Spillover Risk

A second form of systemic risk is a vicious-spiral dynamic referred to as "spillover risk." Spillover risk is initiated when a one-time loss forces an institution to sell large amounts of a particular asset. Those sales temporarily depress that asset's market price, creating liquidity or funding constraints on firms holding the same asset, which in turn induces them to rush to sell other assets at below-market "fire sale" prices.[90] If this process gains enough momentum, it can lead to a widespread hoarding of liquidity and a systemic disruption of credit markets. Insurance companies may now contribute and be susceptible to spillover risk due to the asset side of their balance sheets, which have grown to resemble and become interconnected with those of other financial firms.

The magnitude of insurance companies as investment vehicles may be surprising. The proximate sources of insurers' assets are the massive streams of premiums paid by policyholders, estimated at $4.1 trillion globally for 2009.[91] As a result, the insurance industry's assets account for twelve percent of all global financial assets, with the twenty-five largest insurers in the world holding a combined $10.7 trillion as of 2010.[92] At the end of 2007, life insurers

89 *See* David Jolly, *Swiss Re Gets $2.6 Billion From Berkshire Hathaway*, N.Y. TIMES (Feb. 5, 2009), http://www.nytimes.com/2009/02/06/business/worldbusiness/06swiss.html [http://perma.cc/D75D-ANKE].

90 *See* SQUAM LAKE REPORT, *supra* note 78, at 45–47, 67; ACHARYA ET AL., *supra* note 5, at 263; Andrei Shleifer & Robert Vishny, *Fire Sales in Finance and Macroeconomics*, 25 J. ECON. PERSP. 29, 37 (2011).

91 *See* IAIS, FINANCIAL STABILITY, *supra* note 36, at 17.

92 *Id.* at 21; ACHARYA ET AL., *supra* note 5, at 263.

were the largest source of corporate bond financing, and a more recent estimate finds that insurance companies currently hold 7.8 percent of all credit market debt outstanding.[93]

Although historically insurance companies may have reinvested premiums in low-risk assets, the insurance sector now invests in largely the same assets as banks, securities firms, and hedge funds.[94] For example, it is estimated that total asset-side exposure of the insurance industry to the housing sector and related derivatives at the time of the 2008 Crisis was slightly more than $1 trillion, a number comparable to that of government-sponsored enterprises Fannie Mae and Freddie Mac, and about a fourth of that of the entire banking industry.[95] The interconnectedness of insurance with banking was compounded by the fact that a significant amount of insurance assets were held specifically in the form of debt issued by the same fragile financial institutions that were at the center of the 2008 meltdown.[96] The role of insurers as creditors to the banking sector has only slightly lessened since.[97]

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93 ACHARYA ET AL., *supra* note 5, at 263; *see also* IAIS, FINANCIAL STABILITY, *supra* note 36, at 23; J. David Cummins & Mary A. Weiss, *Systemic Risk and Regulation of the U.S. Insurance Industry*, *in* MODERNIZING INSURANCE REGULATION 85, 95 (John H. Biggs & Matthew P. Richardson eds., 2014).

94 *See generally* NAT'L ASS'N INS. COMM'RS, CAPITAL MARKETS SPECIAL REPORT: UPDATE ON INSURANCE INDUSTRY INVESTMENT PORTFOLIO ASSET MIXES (2013), http://www.naic.org/capital_markets_archive/130924.htm [http://perma.cc/UHB6-L2PA].

95 Christopher L. Foote et al., *Why Did So Many People Make So Many Ex Post Bad Decisions? The Causes of the Foreclosure Crisis* 19, 61 tbl.5 (Fed. Reserve Boston, Public Policy Discussion Paper No. 12-2, 2012), http://www.bostonfed.org/economic/ppdp/2012/ppdp1202.htm [http://perma.cc/MC2V-5CKS].

96 *See* Martin Eling & Hato Schmeiser, *Insurance and the Credit Crisis: Impact and Ten Consequences for Risk Management and Supervision*, 35 GENEVA PAPERS 9, 12 (2010).

97 NAT'L ASS'N INS. COMM'RS, NAIC CAPITAL MARKETS SPECIAL REPORT: U.S. INSURANCE INDUSTRY'S INVESTMENT EXPOSURE TO THE FINANCIAL

Not surprisingly, then, insurance company assets proved vulnerable to strains in the financial system during the 2008 Crisis. One study finds that, in January of 2009, the investment losses of U.S. life insurers triggered regulatory capital requirements that required the insurers to sell annuities and universal life insurance policies at fire sale prices, with average markdowns of twenty-five to fifty-two percent relative to the policies' actuarial values.[98] Japanese life insurer Yamato Life fared even worse, failing outright in October of 2008 as a result of its large investments in securitized financial products that had collapsed in value.[99] Another noteworthy victim of the market turbulence was German health insurer Landeskrankenhilfe, which had €200 million of its €4 billion assets invested in Lehman Brothers at the time of the investment bank's collapse.[100]

The spillover risks posed by insurance are exacerbated by the fact that the industry's assets are concentrated in a relatively small number of large firms. Nearly twenty-four percent of life insurance assets are held by three firms—Metropolitan Life, Prudential, and AIG—while the largest twenty-five life insurance companies hold almost eighty percent of the industry's assets.[101] As a result, econometric research attempting to measure the vulnerability of particular financial institutions to systemic risk finds a prominent place for insurers. A study by Acharya and co-authors, which estimates the "Marginal Expected Shortfall" ("MES") that a firm would suffer from a significant one-time

SECTOR (2013), http://www.naic.org/capital_markets_archive/130405.htm [http://perma.cc/L9UN-5ACZ].

98 Ralph S.J. Koijen & Motohiro Yogo, Insurance Regulation and Policy Firesales 2 (Mar. 2012) (unpublished manuscript), https://www.bauer.uh.edu/departments/finance/documents/seminars/Yogo_040612.pdf [https://perma.cc/KTE6-8VM3].

99 *See* Michiyo Nakamoto, *Japanese Insurer Yamato Life Collapses*, FIN. TIMES (Oct. 10, 2008), http://www.ft.com/intl/cms/s/0/5e003a08-967b-11dd-9dce-000077b07658.html#axzz3mnNxXc3W [http://perma.cc/679A-MRX7].

100 Eling & Schmeiser, *supra* note 96, at 12.

101 ACHARYA ET AL., *supra* note 5, at 263–64 tbl.9.4.

shock to the financial system, finds that up to seven of the twenty highest MES figures for the period of 2005 to 2007 belonged to insurance companies.[102]

Moreover, the growing exposure of insurance companies to macroeconomic variables, as opposed to actuarial risks relating to underwriting accidents, has not abated since 2008. The FIO has warned that the "sustained low interest rate environment" that has followed the global recession "might require insurers to liquidate some assets unexpectedly, which could place price pressure on certain classes of financial assets."[103] In Germany, low interest rates have already forced financial regulators to intervene in life insurance markets, where insurers have issued policies with high minimum guarantees.[104]

3. Information Contagion Risk

A final form of systemic risk is referred to as "information contagion risk." Information contagion takes place when a particular firm unexpectedly fails or an asset price surprisingly plummets and causes financial actors to downgrade their confidence in the quality of information they have *in general* concerning the common fundamentals of entire industries or markets.[105] After investors update their beliefs to incorporate the new information, a newfound risk aversion spreads, leading to increased collateral calls and sell-offs across the financial system. While conceptually distinct from counterparty or spillover risks, information contagion is closely related to both in that it can reinforce

102 *Id.* at 286, 289 tbl.9.7.

103 FIO 2013 REPORT, *supra* note 60, at 47.

104 Jonathan Gould, *Germany to Help Insurers Facing Low Interest Rate Trap*, REUTERS (Nov. 20, 2013), http://uk.reuters.com/article/2013/11/20/uk-insurance-regulation-idUKBRE9AJ0TS20131120 [http://perma.cc/6MN6-AYWL].

105 *See* Viral V. Acharya & Tanju Yorulmazer, *Information Contagion and Bank Herding*, 40 J. MONEY CREDIT & BANKING 215, 215 (2008).

either dynamic and magnify local market disruptions into systemic ones.[106]

Conventional wisdom holds that it was the collapse of Lehman Brothers that triggered the 2008 Crisis and led to a generalized panic in global credit markets. Although the "trigger" metaphor aptly captures the information contagion concept, Lehman's role as the trigger is overstated relative to that of AIG. As Frederic Mishkin has argued, what really pushed the economy "over the cliff" in 2008 was a trio of events following Lehman's bankruptcy filing on September 15, including AIG's resort to $75 billion in federal aid on September 16.[107] The failure of Lehman Brothers was not the predominant source of information contagion, because it was widely regarded as highly fragile at the time of its collapse, whereas the demise of AIG and the scope of its entanglements with the global financial system came as a greater shock.[108] Some suggestive evidence on this point is that interest rates for short-term interbank lending (reflected in the "TED Spread") did not spike upwards until the day after AIG was bailed out.[109]

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106 A theoretical distinction is possible because firesales or counterparty defaults can take place in an information-neutral environment, when wealth actually lost by financial actors forces sales to meet liquidity needs. By contrast, information contagion can occur absent any wealth effect, simply through increased uncertainty and risk premia. Markus K. Brunnermeier & Martin Oehmke, *Bubbles, Financial Crises, and Systemic Risk* 35–39, 48–49 (Nat'l Bureau Econ. Research, Working Paper No. 18398, 2012), http://www.nber.org/papers/w18398.pdf [http://perma.cc/M234-KBW8].

107 Frederic S. Mishkin, *Over the Cliff: From the Subprime to the Global Financial Crisis* 4 (Nat'l Bureau Econ. Research, Working Paper No. 16609, 2010), http://www.nber.org/papers/w16609.pdf [http://perma.cc/UEF4-H7PM].

108 *Id.* at 6 ("[I]n discussions at that time among regulators and academics about the need to regulate a wider group of financial institutions (in which I participated), AIG was *not* mentioned in the category of firms that would require special supervisory attention. . . . [T]he AIG blow-up was a surprise.").

109 *Id.* at 9.

AIG provides a textbook example of contagion risk produced by the unexpected insolvency of a Too Big to Fail institution, but the concurrent failure of multiple medium-sized firms can have an equivalent effect.[110] The latter form of information contagion emanating from the insurance industry involved the credit rating agencies' rapid series of downgrades on nearly all of the major monoline insurers during spring of 2008.[111] The monolines' business model hinged on maintaining AAA ratings above all else; when those ratings were lost, markets were forced to reevaluate a wide range of assets in a new, information-scarce environment.[112] The downgrades spurred sell-offs across numerous global markets and,[113] after Fitch's downgrade of Ambac on January 19, 2008, were the impetus for the first "emergency cut" of the federal funds rate since 1982.[114] One clear reflection of the uncertainty caused by the monoline downgrades was that, "[a]t times during 2008, municipal bonds backed by [downgraded] monolines traded at levels worse than if they had no insurance at all."[115] Quantitative studies have emphasized rating downgrades as the mechanism through which monolines contributed to systemic risk as well.[116]

110 *Cf.* Viral Acharya, Demos Gromb & Tanju Yorulmazer, *Too Many to Fail—An Analysis of Time-Inconsistency in Bank Closure Policies*, 16 J. FIN. INTERMEDIATION 1, 1–31 (2007).

111 ASS'N FIN. GUAR. INSURERS, SUBPRIME CRISIS: TIMELINE OF RATING AGENCY ACTIONS 4–5 (2008), http://afgi.org/resources/Subprime_Crisis_Timeline.pdf [http://perma.cc/6BHL-EV43].

112 *See* Schich, *supra* note 61, at 103.

113 FIO MODERNIZATION REPORT, *supra* note 10, at 19; *see also* Goodhart, *supra* note 12, at 51.

114 Brunnermeier, *supra* note 78, at 87.

115 WELLS FARGO ADVANTAGE FUNDS, DETERIORATION OF MONOLINE INSURANCE COMPANIES AND THE REPERCUSSIONS FOR MUNICIPAL BONDS 13 (2008), https://www.wellsfargoadvantagefunds.com/pdf/whitepapers/monoline_insurance_muni_bonds.pdf [https://perma.cc/584K-QRCY].

116 *See* Fang Chen et al., *Systemic Risk, Financial Crisis and Credit Risk Insurance*, 48 FIN. REV. 417, 438 (2013).

In summary, the insurance industry has undergone a fundamental transformation over the past dozen years. Insurance companies now offer products and services that function as substitutes for those provided by banks, securities firms, and other financial intermediaries. As a result, insurance firms have also become interconnected with other financial institutions and relevant to systemic risks affecting the stability of the entire financial sector. Importantly, as the Swiss Re, Yamato Life, and Landeskrankehilfe upheavals reveal, the convergence of insurance with the financial system has taken place on an international scale. Indeed, while AIG's entanglement with several of Europe's biggest banks was a well-known and controversial aspect of its bailout, even in the seemingly domestic-oriented financial guarantee segment, roughly one-fifth of the business reported on the balance sheets of the nine largest monoline insurers qualified as international.[117] The following Part III therefore outlines the regulatory regimes for insurance at both the domestic and international levels, and analyzes the extent to which they have adapted to these economic changes.

III. THE TWO TIERS OF INSURANCE REGULATION

Although the insurance industry has converged with the broader financial services sector over the past twenty years, the structure of insurance regulation has not evolved substantially in response. Instead, in the face of market integration, the defining feature of insurance regulation remains its extreme fragmentation across jurisdictions.[118] Domestically, the nearly exclusive delegation of insurance regulation to the states means that there are effectively fifty-plus distinct regulatory regimes within the United States. Moreover, the balkanized structure of insurance regulation

117 Schich, *supra* note 61, at 91.

118 *See* Martin F. Grace & Robert W. Klein, *The Future of Insurance Regulation: An Introduction*, *in* THE FUTURE OF INSURANCE REGULATION IN THE UNITED STATES 2 (Martin F. Grace & Robert W. Klein, eds., 2009).

is two-tiered; it reappears at the international level, where harmonization of insurance rules across countries has lagged markedly behind international regulatory cooperation relating to banking or securities. A second defining feature of insurance regulation, also apparent at both tiers, is that definitional boundaries are predominantly drawn along formal-institutional, rather than functional, lines—an institution characterized as an "insurance company" will be subject to an idiosyncratic body of "insurance regulation" regardless of whether it serves diverse economic functions that overlap with other financial services.

This Part III provides an overview of the structure of insurance regulation at the domestic and international levels and explains how it has been reformed in response to the 2008 Crisis. The energetic regulatory response to the 2008 Crisis—domestically, with Dodd-Frank, and in a number of international efforts—did not overhaul the previous regulatory architecture, but instead represents tentative first steps at addressing the fragmented jurisdictional boundaries and formalistic definitional boundaries of insurance regulation. Thus, the regulation of insurance is poised at a potential turning point, in which regulatory boundaries may be redrawn in a more or less aggressive manner to respond to the convergence of insurance with other financial services that was described above.

A. Domestic

1. Pre-2008

Although the issue has been subject to some refinement in the courts, it is the McCarran-Ferguson Act of 1945—which provides that federal antitrust laws are inapplicable to the "business of insurance . . . to the extent that such business is regulated by State Law"—that remains the central federal insurance statute and is the linchpin of the

contemporary state-centered insurance regime.[119] In each state, insurance regulation is overseen by a state insurance department, which is led by an insurance commissioner.[120] State insurance departments pursue two overarching goals: (1) consumer protection, through a variety of measures such as price-setting, licensing requirements, and product disclosure requirements (often referred to as "market conduct" rules);[121] and (2) maintaining the solvency of insurance companies operating within the state.[122] The primary vehicle for safeguarding insurance company solvency is statutory reserve and surplus requirements, which require insurers to maintain sufficient assets to meet policyholders' claims as they come due.[123] A second important regulatory device found in every state is an insurance guarantee fund, usually separated along property and casualty and life-and-health lines, which serves as a backstop to payout claims owed by failed insurers when surplus and reserve requirements prove insufficient.[124]

The largest factor militating against divergence of insurance regulation across states is the National Association of Insurance Commissioners ("NAIC"), a

119 McCarran-Ferguson Act, 15 U.S.C. §§ 1011–15 (1947); *see* U.S. TREASURY DEP'T, BLUEPRINT FOR A MODERNIZED FINANCIAL REGULATORY STRUCTURE 62–63 (2008) [*hereinafter* PAULSON PLAN], http://www.treasury.gov/press-center/press-releases/Documents/Blueprint.pdf [http://perma.cc/Z7MC-DGDY]; *cf.* Union Labor Life Ins. Co. v. Pireno, 458 U.S. 119, 129 (1982) (laying out three factors that circumscribe the "business of insurance"); Group Life & Health Ins. Co. v. Royal Drug Co., 440 U.S. 205, 219–20 (1979).

120 *See* Robert W. Klein, *The Insurance Industry and Its Regulation: An Overview*, *in* THE FUTURE OF INSURANCE REGULATION IN THE UNITED STATES 13, 32–33 (Martin F. Grace & Robert W. Klein, eds., 2009).

121 *See* PAULSON PLAN, *supra* note 119, at 67–71 (reviewing common consumer protection regulations).

122 *See* NAT'L ASS'N INS. COMM'RS CONST. art. II (1980), http://www.naic.org/documents/PRC-ZS-15-01_Vol1.pdf [http://perma.cc/UF8Q-YRS6] (articulating these goals); Klein, *supra* note 120, at 32–34; PAULSON PLAN, *supra* note 119, at 63–64.

123 *See* Klein, *supra* note 120, at 36.

124 *See* PAULSON PLAN, *supra* note 119, at 64, 65–67.

voluntary association of state insurance commissioners formed in 1871.[125] The historical objectives of the NAIC have been to promote uniformity in state legislation affecting insurance, to pool industry information, and to coordinate regulatory change among the states.[126] Its main achievement has been the development of model laws—relating to accounting principles, capital requirements, and financial disclosure requirements—which have been widely adopted by state insurance departments.[127] In addition to standard legislative inertia, proposals to federalize insurance have often been headed off by the efforts of the NAIC, which rushes to develop modest substitutes for the proposed federal regulation and joins the insurance lobby in emphasizing the relatively successful track record of state-level insurance oversight.[128]

A major legislative development affecting the regulation of insurance firms was the passage of the Gramm-Leach-Bliley Act of 1999 ("GLB").[129] Prior to GLB, insurance companies had been partially walled off from forming combinations with other financial services firms, particularly banks pursuant to the Bank Holding Company Act of 1956.[130] GLB represented a final blow and formal end to this

125 The NAIC is technically a private organization, similar to a trade association, and as such has no legal authority to compel state regulators. *See* Susan Randall, *Insurance Regulation in the United States: Regulatory Federalism and the National Association of Insurance Commissioners*, 26 FLA. ST. L. REV. 625, 638 (1999). It is largely funded by the insurance industry, and is widely understood to be aligned with its interests. *Id.* at 638–40.

126 *See id.* at 634–35.

127 *See id.* at 636–37.

128 *See id.* at 640.

129 Gramm-Leach-Bliley Act of 1999, Pub. L. No. 106-102, 113 Stat. 1338 (codified as amended in scattered sections of 12 U.S.C. and 15 U.S.C. (2012)) [hereinafter GLB]. *See generally* Broome & Markham, *supra* note 8; Macey, *supra* note 8.

130 Bank Holding Company Act of 1956, Pub. L. No. 84-511, 70 Stat. 133 (codified as amended at 12 U.S.C. §§ 1841–1852 (2012) and in scattered sections of 26 U.S.C.). "Partially" is an important caveat, because prior to GLB, insurance companies could hold bank-like thrifts as

approach with its creation of "financial holding companies" ("FHCs"), which may house both banking and insurance subsidiaries and are subject to monitoring by the Federal Reserve in its role as an "umbrella supervisor."[131] Despite these changes however, GLB preserves the McCarran-Ferguson framework by explicitly reserving insurance regulation to the states and directing courts to review federal agency actions that encroach on state insurance prerogatives without the standard *Chevron* deference.[132] GLB also generally prohibits national banks and their subsidiaries from underwriting insurance, a restriction that was previously applied to state-chartered banks under the Federal Deposit Insurance Improvement Act ("FDICIA") of 1991.[133] A final significant aspect of GLB is that it seeks to harmonize insurance regulation across state lines with a requirement that state insurance regulators adopt rules—as formulated by a newly created private entity, the National Association of Registered Agents and Brokers ("NARAB")—that provide for reciprocity or mutual recognition of licensing requirements for foreign insurance agents operating within their state.[134]

Regulation of other financial institutions has also historically been characterized by somewhat fragmented jurisdictional boundaries, but to a significantly lesser degree

subsidiaries under the Savings and Loan Holding Company Act of 1994. 12 U.S.C. § 1467a(c)(3)(A); *see* Broome & Markham, *supra* note 8, at 743–45.

131 *See* GLB § 103(c)(1)(B), 12 U.S.C. § 1841(p) (2012) (providing for FHCs); GLB § 111, 12 U.S.C. § 1844(c) (establishing the Federal Reserve Board's oversight role).

132 GLB § 104, 15 U.S.C. § 6701 (2012) (preserving McCarran-Ferguson); GLB § 304(e), 15 U.S.C. § 6714(e) (2012) (denying deference under Chevron, U.S.A. Inc. v. Natural Res. Def. Council, Inc., 467 U.S. 837 (1984)).

133 GLB § 302(a), (b), 15 U.S.C. § 6712(a), (b) (2012); Federal Deposit Insurance Corporation Improvement Act of 1991 § 1831(a), 12 U.S.C. § 1811 (1991).

134 *See* GLB § 322, 15 U.S.C. § 6752 (2012). Under GLB, the NARAB is to be supervised by the NAIC. GLB § 324, 15 U.S.C. § 6754 (2012).

than in the case of insurance. Although there is significant state regulation of banking and securities firms,[135] it sits alongside a more substantial federal component.[136] In fact, insurance was essentially the only area of the financial services industry that did not come under at least partial federal regulation as part of the New Deal.[137] As a result, insurance is unique in comparison to the rest of finance, in that it is subject to a much more limited (and nearly non-existent) set of common, nationally applicable regulations.

Insurance regulation has also been characterized by formalistic definitional boundaries that establish a regulatory treatment for "insurers" and "insurance" that is distinct from other financial services. Granted, GLB was originally marketed as a move towards more functional regulation and was contrasted with the strict, formal distinctions separating different financial entities established under the Glass-Steagall Act.[138] However, GLB is better understood, at least in the insurance context, as preserving the traditional approach. For one, few large insurance conglomerates, including AIG, were structured so as to qualify as an FHC subject to the Federal Reserve's umbrella supervision.[139] Second, GLB itself reinforces the prior formalistic approach through various "push out" rules that attempt to make holding companies organize their subsidiaries' financial services based on the entity type with which the subsidiaries have been historically associated.[140]

135 *See* PAULSON PLAN, *supra* note 119, at 53–54.

136 *See id.* at 61; Broome & Markham, *supra* note 8, at 746.

137 *See* BAIR, *supra* note 19, at 6–9.

138 *See* S. REP. NO. 106-44, at 9–10 (1999) (legislative history touting "functional" regulation as an animating principle of GLB); H.R. REP. NO. 106-74, pt. 1, at 97–98 (1999) (same); *see also* PAULSON PLAN, *supra* note 119, at 139; Broome & Markham, *supra* note 8, at 758 (referring to GLB's "adoption of a functional regulatory structure").

139 *See Financial Holding Companies*, BD. GOVERNORS FED. RESERVE SYS. (Sept. 17, 2015), www.federalreserve.gov/generalinfo/fhc/ [http://perma.cc/MGH6-UQL9].

140 *See, e.g.*, GLB, 15 U.S.C. § 78c. As a result, "[f]unctional regulation under GLB is premised, however, on the notion that banking activities and

GLB also provides a circular definition of "insurance" that does not attempt to draw functional economic distinctions but instead retains state regulators' interpretation of the term.[141] Thus, the cachet of "functional" as a regulatory buzzword at the time of GLB belies what was essentially a formal, entity-based regime for insurance regulation during the pre-2008 period.[142]

2. Post-2008

The central domestic regulatory response to the 2008 Crisis was the passage of the Dodd-Frank Act in 2010, which includes important reforms that affect insurance.[143] The most prominent of Dodd-Frank's insurance-related reforms is that it establishes the FIO, the first federal regulatory agency explicitly tasked with addressing the insurance industry.[144] The FIO's main function is supervisory—under the Act, it is "to monitor all aspects of the insurance industry, including identifying issues or gaps in the regulation of insurers that could contribute to a systemic crisis."[145] Another purpose of the FIO is to serve as a coordinating body; for instance, it is required to consult with state insurance regulators "regarding insurance matters of national importance."[146] The FIO is also tasked with

insurance activities will be conducted in separate functionally regulated subsidiaries of an FHC." Broome & Markham, *supra* note 8, at 778–79.

141 GLB § 302(c), 15 U.S.C. 6712(c) (2012); *see* Faucette, *supra* note 8, at 639–40 (explaining GLB's definition of insurance).

142 *See* Broome & Markham, *supra* note 8, at 783.

143 *See* Dodd-Frank §§ 501–542, 31 U.S.C. §§ 313–315, 15 U.S.C. §§ 8201–8206, 8221–8223, 8231–8232 (2012).

144 Dodd-Frank § 502, 31 U.S.C. § 313 (2012). The FIO is a department of the U.S. Treasury, with its director appointed by the Treasury Secretary. 31 U.S.C. § 313(c) (2012).

145 31 U.S.C. § 313(c) (2012). In addition, Dodd-Frank directs the FIO to submit a "Study and Report" to provide a comprehensive plan "to modernize and improve the system of insurance regulation in the United States." *Id.* § 313(p). Such a report was belatedly issued on December 14, 2013. *See* FIO MODERNIZATION REPORT, *supra* note 10.

146 31 U.S.C. §§ 313(c), 314 (2012).

"develop[ing] Federal policy on prudential aspects of international insurance matters," including representing the United States in international fora concerning insurance regulation.[147]

Related to its role as supervisor of the insurance industry, the FIO is empowered to recommend that the Financial Stability Oversight Council ("FSOC")—another entity created by Dodd-Frank—designate insurers as systemically "significant nonbank financial companies" under the Act.[148] Once designated "systemically significant" via a two-thirds vote in the FSOC, a financial institution becomes subject to enhanced regulation and supervision by the Federal Reserve. The designation also potentially subjects insurers to the "Collins Amendment" to Dodd-Frank, which allows the Treasury to require increased minimum capital requirements for non-bank institutions consistent with the latest Basel III capital rules for banks.[149] The FSOC released its final rule and interpretive guidance setting out the criteria for designating non-bank systemic institutions on April 11, 2012, and to date has designated insurers AIG, Prudential, and MetLife as systemically significant.[150]

147 *Id*. §§ 313(c)(1)(E), 314 (2012).

148 Dodd-Frank § 111, 12 U.S.C. § 5321 (2012) (establishing the FSOC); Dodd-Frank § 113, 12 U.S.C. § 5323 (2012) (allowing for designation of non-bank financial companies).

149 See Dodd-Frank § 171, 12 U.S.C. § 5371 (2012); BASEL COMMITTEE, BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS (2010).

150 *See* Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies, 77 Fed. Reg. 21,637, 21,639–47 (Apr. 11, 2012) (to be codified at Appendix A to 12 C.F.R. pt. 1310). U.S. DEP'T OF THE TREASURY, AIG (2013) (designating AIG as systemically significant), http://www.treasury.gov/initiatives/fsoc/designations/Documents/Basis%20of%20Final%20Determination%20Regarding%20American%20International%20Group,%20Inc.pdf [http://perma.cc/LF87-4LZK]; U.S. DEP'T OF THE TREASURY, PRUDENTIAL (2013) (designating Prudential as systemically significant), http://www.treasury.gov/initiatives/fsoc/designations/Documents/Prudential%20Financial%20Inc.pdf [http://perma.cc/GKH4-CQXE]; U.S. DEP'T OF THE TREASURY, METLIFE (2014) (designating MetLife as systemically significant), http://www.treasury.gov/initiatives/fsoc/desig

The NAIC has also been active in leading reform of state regulation in response to the 2008 Crisis, particularly through its Solvency Modernization Initiative ("SMI").[151] A major product of the SMI is the NAIC's amendments to its Model Insurance Holding Company System Regulatory Act, which enhances oversight of insurance groups operating in multiple states by encouraging "supervisory colleges" of state regulators to share information and coordinate prudential supervision of insurers.[152] The NAIC has also drafted a set of Own-Risk Solvency Assessment guidelines, which outline qualitative and quantitative standards to guide state regulators in applying solvency rules and administering stress tests to insurers.[153]

Taken as a whole, Dodd-Frank essentially preserves all of the balkanized jurisdictional boundaries of insurance regulation's pre-2008 status quo, while at the same time providing mechanisms that may potentially be used as a basis for harmonizing reforms going forward.[154] Most obviously, Dodd-Frank maintains the decentralized state-led system as provided by McCarran-Ferguson. As currently constituted, the FIO has deceptively little power: it has been given a variety of oversight functions, but none that allow it to actually promulgate substantive insurance regulation.[155] At the same time, the NAIC remains a powerful force on the side of states and its latest round of reforms, particularly those that promote supervisory colleges, parallel and in some

nations/Documents/MetLife%20Public%20Basis.pdf [http://perma.cc/D7KE-HHJP].

151 *See* FIO 2013 REPORT, *supra* note 60.

152 *See id.* at 41–42; *see also* Kelly Kirby, *Supervisory Colleges: Improving International Supervisory Coordination*, 19 CONN. INS. L.J. 149, 159 (2012).

153 *See* FIO 2013 REPORT, *supra* note 60, at 42–43.

154 *See* HESTER PEIRCE & JAMES BROUGHEL, DODD-FRANK 61, 63 (2012) ("The limited nature of the changes to insurance regulation reflects the fact that the framers of Dodd-Frank did not believe insurance companies were central to the crisis. . . . Dodd-Frank dipped its toe into increased federalization of insurance regulation.").

155 *Id.* at 61; Brown, *supra* note 7, at 598.

ways compete with the FIO's supervisory responsibilities.[156] On the other hand, the creation of the FIO is an indisputable institutional innovation and may prove to be a pivotal first step for gradually expanding federal regulation of insurance and harmonizing international agreements.[157] Dodd-Frank leaves open the ability to expand the FIO's powers by providing that the FIO is "to perform such other related duties and authorities as may be assigned to the Office by the [Treasury] Secretary."[158] Indeed this process may already be underway, because "[t]he proposed 2014 budget released by the Office of Management and Budget in April 2013 contains language that suggests FIO may be positioning itself to take on some form of regulatory role in the future."[159]

Dodd-Frank also leaves the GLB model of formal-institutional definitional boundaries largely intact, while at the same time providing regulators with a potentially vast discretion to take a more functional approach that does not cleanly distinguish insurers from banks. It is unclear how broadly the FSOC's authority to designate non-bank financial institutions as systemically significant will be exercised. It may only result in a modest extension to the Financial Holding Company provisions of GLB, by making the Federal Reserve's umbrella supervisor role applicable based on a holistic review of a financial institution's systemic risks rather than its technical holding company structure. Much turns on the applicability of the Collins Amendment to insurers designated as systemically significant, which also remains unknown.[160] Dodd-Frank provides other carve-outs that allow for a unique treatment of insurance as well. For example, the Act establishes a new Orderly Liquidation

156 *See* Kirby, *supra* note 152, at 184.

157 *See* PEIRCE & BROUGHEL, *supra* note 154, at 61–62; Brown, *supra* note 7, at 555.

158 31 U.S.C. § 313(c)(1)(H) (2012).

159 Brown, *supra* note 7, at 594.

160 *See infra* Part IV.B.2 (discussing the implications of the Collins Amendment for insurance regulation).

Authority ("OLA") that empowers the FDIC to take insolvent "covered financial compan[ies]" into receivership, but those provisions do not extend to insurance companies unless state guarantee funds fail to take them into receivership within sixty days.[161] Finally, the FIO itself reflects the special treatment of insurance companies despite market convergence, and is a testament to the formalist-institutional legacy of GLB.

B. International

The 2008 Crisis demonstrated that financial markets have become sufficiently integrated across countries for insurance groups to become entangled in systemic risks on a global scale. As a consequence, considering the need for a second tier of insurance regulation at the international level is now unavoidable. Prior to 2008, cross-border insurance regulation paralleled regulation at the domestic tier, in that insurance rules were substantially less harmonized across national jurisdictions than was the case with other financial services such as banking and securities.[162] International cooperation on insurance also reflected the domestic tendency to draw definitional boundaries along formalistic lines that underscored the distinctiveness of entities providing insurance. In response to the 2008 Crisis, international financial regulators have become more active in the area of insurance. However, the most recent international projects follow the same pattern as their domestic counterparts: new efforts at international coordination of insurance regulation have not produced

161 *See* Dodd-Frank § 204, 12 U.S.C. § 5384 (2012) (providing for OLA); FIO 2013 REPORT, *supra* note 60, at 40.

162 *See* DAVID ANDREW SINGER, REGULATING CAPITAL: SETTING STANDARDS FOR THE INTERNATIONAL FINANCIAL SYSTEM 112 (2007); INT'L ASS'N OF INS. SUPERVISORS, GUIDANCE PAPER ON THE USE OF SUPERVISORY COLLEGES IN GROUP-WIDE SUPERVISION ¶¶ 45, 75 (2009), http://iaisweb.org/index.cfm?event=openFile&nodeId=34123 [http://perma.cc/A9UL-6454].

changes to substantive rules, but nonetheless may serve as institutional springboards towards more concrete reforms.

1. Pre-2008

Established in 1994, the International Association of Insurance Supervisors ("IAIS") is the primary international forum for cooperation on insurance regulation.[163] It is an example of what are known as "transgovernmental networks"—informal bodies that are not created pursuant to treaties, in which domestic regulators from member countries meet to pool expertise and formulate non-binding rules by consensus.[164] The IAIS's primary output prior to the 2008 Crisis was its issuance of a collection of supervisory guidelines known as the Insurance Core Principles in 2003[165] and a further set of Solvency Principles, published in 2007.[166] The IAIS also participates in a body known as the Joint Forum—a three-member group including the Basel Committee on Banking Supervision ("Basel Committee") and International Organization of Securities Commissions ("IOSCO")—which formulates principles for the regulation of conglomerates that combine subsidiaries providing banking, securities, and insurance services.[167] Although the IAIS and

163 *See generally* Elizabeth F. Brown, *The Development of International Norms for Insurance Regulation*, 34 BROOK. J. INT'L L. 954, 963 (2009).

164 *See* Eric J. Pan, *Challenge of International Cooperation and Institutional Design in Financial Supervision: Beyond Transgovernmental Networks*, 11 CHI. J. INT'L L. 243, 254–55 (2011).

165 INT'L ASS'N OF INS. SUPERVISORS, INSURANCE CORE PRINCIPLES AND METHODOLOGY (2003), http://iaisweb.org/index.cfm?event=openFile&nodeId=34135 [http://perma.cc/P9PP-8KYV] [hereinafter IAIS CORE PRINCIPLES].

166 INT'L ASS'N OF INS. SUPERVISORS, THE IAIS COMMON STRUCTURE FOR THE ASSESSMENT OF INSURER SOLVENCY (2007), http://iaisweb.org/index.cfm?event=openFile&nodeId=34391 [http://perma.cc/8FPE-9SJF] [hereinafter IAIS SOLVENCY PRINCIPLES].

167 Press Release, IOSCO, Joint Forum—Amplified Mandate (June 14, 2002), http://iaisweb.org/index.cfm?event=openFile&nodeId=34297 [http://perma.cc/RMG8-Y3MU].

Joint Forum's principles documents embody a considerable amount of international collaboration and shared institutional knowledge, their concrete effect on the regulation of insurance is likely slight because the provisions of these documents are merely hortatory rather than binding, and are pitched at a level of abstraction that prevents them from providing much practical guidance to domestic regulators.[168]

In addition to the IAIS, the World Trade Organization's ("WTO") Financial Services Agreement of 1997 ("FSA") is a binding international treaty that has implications for insurance.[169] The FSO covers insurance in addition to banking and other financial services, and applies the WTO's principles of non-discrimination and market access to these industries.[170] But in contrast to the WTO's success in areas such as trade in goods or intellectual property, FSA provisions provide a multitude of exceptions that have allowed WTO members to avoid implementing it in a meaningful manner.[171] Moreover, the United States has expressly excluded the vast majority of state insurance regulations from the FSA. Thus, as with the IAIS's principles documents, agreements under the WTO have not led to

168 *See* SINGER, *supra* note 162, at 97; DANIEL W. DREZNER, ALL POLITICS IS GLOBAL: EXPLAINING INTERNATIONAL REGULATORY REGIMES 81–85 (2007). *See, e.g.*, IAIS CORE PRINCIPLES, *supra* note 165, at 24 (Principle No. 12: "The supervisory authority receives necessary information to conduct effective off-site monitoring and to evaluate the condition of each insurer as well as the insurance market."); IAIS SOLVENCY PRINCIPLES, *supra* note 166, at 13 (Principle No. 3.1.1: "A robust solvency regime should aim to ensure that there is a high degree of certainty that insurance obligations can be met even if the insurer is unable to continue in business.").

169 The Financial Services Agreement was an extension of the WTO's General Agreement on Trade in Services ("GATS"), concluded in 1994. General Agreement on Trade in Services, Jan. 1, 1995, WTO Agreement, ANNEX 1B, Financial Services Agreement, 1997.

170 *Id.* at art. XVII.

171 *See* Pan, *supra* note 164, at 251–52; Brown, *supra* note 163, at 961.

concrete progress in harmonizing the regulatory treatment of insurers on an international basis.

Consistent with the modest results produced by the IAIS and under the FSA, there was a wide divergence in substantive insurance regulation across countries prior to the 2008 Crisis.[172] International jurisdictional boundaries in insurance are particularly fragmented relative to those of other financial services, where there has been a longer history of cooperation that has produced more substantive agreements.[173] For example, international coordination of banking regulation began as early as 1974 with the formation of the Basel Committee, an organization that has formulated multiple generations of elaborate bank capital requirements (the most recent being "Basel III"), which have been implemented by domestic bank supervisors of the Basel Committee's member states.[174] The IOSCO, established in 1983, has successfully pursued measures to facilitate cross-border securities listings, and concluded a multilateral information sharing agreement among securities regulators in 2002.[175] The International Swaps and Derivatives

172 *See generally* JOHN A. COOKE & HAROLD D. SKIPPER, AN EVALUATION OF THE US INSURANCE REGULATION IN A COMPETITIVE WORLD INSURANCE MARKET (2008), http://bipac.net/afc/Cooke_and_Skipper.pdf [http://perma.cc/UNN9-SDKE]; SINGER, *supra* note 162, at 96–114; Brown, *supra* note 163, at 953, 959.

173 *See* SINGER, *supra* note 162, at 97; Brown, *supra* note 163, at 953.

174 *See, e.g.*, BASEL COMM. ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS (1988), http://www.bis.org/publ/bcbs04a.pdf [http://www.perma.cc/XHL2-SJKB] [hereinafter Basel I]; BASEL COMM. ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS: A REVISED FRAMEWORK (2006), http://www.bis.org/publ/bcbs128.pdf [http://www.perma.cc/U62T-HCMR] [hereinafter Basel II].

175 *See, e.g.*, Samuel Wolff, *Implementation of International Disclosure Standards*, 22 U. PA. J. INT'L ECON. L. 91 (2001); IOSCO, MULTILATERAL MEMORANDUM OF UNDERSTANDING CONCERNING CONSULTATION AND COOPERATION AND THE EXCHANGE OF INFORMATION (2002). In contrast, the IAIS MMoU includes only seventeen jurisdictions, none of which are U.S. regulators. *See* Kirby, *supra* note 152, at 163. Instead, the NAIC has

Association, Inc. ("ISDA"), a private industry group, has also done important work in standardizing derivatives transactions and formulating widely adopted model laws.[176] Lastly, the International Accounting Standards Board, another non-governmental organization, has developed model accounting codes that have been adopted by a number of national regulators and applied to securities firms.[177] Fragmentation of insurance at the international level is not a coincidence, because the two regulatory tiers are inter-related: a major obstacle for international cooperation on insurance has been the high negotiating costs facing the United States, which must achieve uniformity across its own fifty-plus insurance jurisdictions before it can commit to do so in an international agreement.[178]

2. Post-2008

In response to the 2008 Crisis, international bodies dealing with financial regulation have become more active in addressing insurance.[179] Pursuant to a declaration arising from the G-20 Washington Summit of November 2008, the IAIS has taken up efforts to revise its 2007 Solvency Principles and related documents, and is working to update supervisory principles for international insurance conglomerates as part of the Joint Forum.[180] The IAIS is also developing an enhanced framework specifically for the

entered a handful of more limited bilateral MoUs with countries in Latin America, Asia, and the Middle East. *See* Brown, *supra* note 163, at 962.

176 *See generally* Gabriel V. Rauterberg & Andrew Verstein, *Assessing Transnational Private Regulation of the OTC Derivatives Market*, 54 VA. J. INT'L L. 9 (2013).

177 *See* Brown, *supra* note 163, at 959.

178 *See* SINGER, *supra* note 162, at 113; DREZNER, *supra* note 168, at 44; Brown, *supra* note 163, at 972–88.

179 *See* FIO 2013 REPORT, *supra* note 60, at 43–46.

180 *See* INT'L ASS'N OF INS. SUPERVISORS, G20 RESPONSE, *supra* note 11; BASEL COMM. ON BANKING SUPERVISION, JOINT FORUM, PRINCIPLES FOR THE SUPERVISION OF FINANCIAL CONGLOMERATES (2012), http://www.bis.org/publ/joint29.pdf [http://perma.cc/3W5P-UEZB].

supervision of "internationally active insurance groups," which it refers to as the Common Framework, or ComFrame.[181] The ComFrame aims to establish criteria for identifying "internationally active" insurers (estimated to cover close to fifty insurance groups), formulate principles for group-supervision, and facilitate the functioning of international supervisory colleges.[182]

The IAIS has also worked as an advisor to the Financial Stability Board ("FSB"), which has tasked the IAIS with identifying "G-SIIs" (Global, Systemically Important Insurers) as a sub-group of its list of "G-SIFIs" (Global, Systemically Important Financial Institutions). In July 2013, the FSB, in consultation with the IAIS, initially designated nine institutions as G-SIIs—including U.S. insurers AIG, MetLife, and Prudential Financial.[183] The FSB intends to subject G-SIIs to three policy measures reflecting heightened supervisory standards and regulatory requirements: (1) resolution plans; (2) enhanced group-wide supervision; and (3) higher loss absorbency requirements for non-traditional insurance activities.[184]

A final noteworthy development since the 2008 Crisis has been the European Union's ("EU") formulation of its Solvency II Directives and its related collaboration with the United States. Solvency II refers to a body of insurance

181 *See* INT'L ASS'N OF INS. SUPERVISORS, FREQUENTLY ASKED QUESTIONS FOR THE IAIS COMMON FRAMEWORK FOR THE SUPERVISION OF INTERNATIONALLY ACTIVE INSURANCE GROUPS (COMFRAME) (2011), http://iaisweb.org/index.cfm?event=openFile&nodeId=52819 [http://perma.cc/S5C7-H9EW].

182 *See* INT'L ASS'N OF INS. SUPERVISORS, WORKING DRAFT OF THE COMMON FRAMEWORK FOR THE SUPERVISION OF INTERNATIONALLY ACTIVE INSURANCE GROUPS (2012), http://iaisweb.org/index.cfm?event=openFile&nodeId=57042 [http://perma.cc/63PM-U3WG] [hereinafter COMFRAME WORKING DRAFT]; Kirby, *supra* note 152, at 166–68.

183 *See* FSB, GLOBALLY SYSTEMICALLY IMPORTANT INSURERS (G-SIIS) AND THE POLICY MEASURES THAT WILL APPLY TO THEM 2–4 (2013), http://www.financialstabilityboard.org/wp-content/uploads/r_130718.pdf?page_moved=1 [http://perma.cc/Z2XW-AE6N].

184 *See id.* at 1–2.

regulations adopted by the EU in 2009 and formalized in 2013,[185] which updates the decades-old Solvency I regulations with a "three pillar structure" that is analogous to Basel II's capital adequacy requirements for banks.[186] Solvency II is an important piece of international insurance reform not only because it harmonizes regulation across the EU countries, but also because it applies to any foreign insurers that operate within Europe. As a result, since 2012, the FIO has represented the United States in an initiative known as the EU-U.S. Dialogue Project, which seeks to identify (and possibly eliminate) differences between U.S. insurance rules and the forthcoming Solvency II regime.[187]

Taken as a whole, these post-2008 international initiatives parallel the changes made by Dodd-Frank in that they provide various institutional platforms that may either prove to lack substance or instead serve as starting points for ambitious reforms that respond to the newfound role of insurance in the global financial system. For example, the IAIS's ComFrame might enhance the uniformity of insurance supervision across national jurisdictional boundaries in a meaningful way, or not. The NAIC is one source of resistance on this point, and has stated its position that "given the uniqueness and complexity of large insurance group issues, ComFrame should focus on general principles and high-level concepts, rather than specific compliance issues and capital requirements that more likely would be a source of conflict."[188] Likewise, the FSB's identification of G-SIIs closely mirrors the FSOC's designation of systemically

185 *See* Council Directive 2009/138, art. 1, 2009 O.J. (L 335) 1 (European Council directive adopting Solvency II).

186 *See generally* Michaell J-H. Smith, *Solvency II: The Ambitious Modernization of the Prudential Regulation of Insurers and Reinsurers Across the European Union (EU)*, 16 CONN. INS. L.J. 357 (2012).

187 *See* FIO 2013 REPORT, *supra* note 60, at 43–44; NAT'L ASS'N INS. COMM'RS, EU-U.S. DIALOGUE PROJECT, THE WAY FORWARD: OBJECTIVES AND INITIATIVES FOR THE FUTURE (2012), http://www.naic.org/documents/eu_us_dialogue_wayforward_121220.pdf [http://perma.cc/WE4P-Q2CF].

188 Kirby, *supra* note 152, at 167–68.

significant non-bank institutions, but whether the heightened scrutiny that the G-SIIs are purported to receive has any teeth remains to be seen. Lastly, it is unclear if the EU-U.S. Dialogue Project will bring U.S. insurance regulation into greater conformity with the EU's Solvency II rules or merely serve as a talking shop. Much of this depends on the performance of the FIO, which was intentionally designed under Dodd-Frank to provide the United States with a single face at these international fora in order to avoid the unwieldy fifty-state negotiator that hindered pre-2008 efforts at cross-border harmonization of insurance rules.

IV. BOUNDARY PROBLEMS IN THE REGULATION OF INSURANCE

The recent economic and legal developments affecting insurance, explored in detail above, present fundamental regulatory dilemmas that mirror those facing the future of finance as a whole. Namely, they put immense pressure on the jurisdictional and definitional boundaries that currently determine which financial services are subject to "insurance" regulation and how broadly those regulations apply. This Part presents the theoretical tradeoffs implicated by each boundary problem, analyzes the practical policy implications they raise for insurance regulation, and suggests some general directions for reform.

A. The Jurisdictional Boundary Problem: Regulatory Harmonization versus Regulatory Competition

Necessarily embedded in every substantive regulation is a rule that delineates a jurisdictional boundary across which the regulation is no longer operative. Jurisdictional boundaries may not be particularly problematic for many regulated activities, but they are relevant in finance where assets are highly mobile and can often be transferred across jurisdictional boundaries with transactions that require little more than a keystroke. The jurisdictional boundary problem raises the policy question of how to determine the optimal

balance between regulatory harmonization and competition across jurisdictions. Regulatory harmonization refers to a process in which jurisdictions coordinate to apply uniform rules.[189] In contrast, regulatory competition denotes a state in which jurisdictions compete with one another by providing diverse set of regulations.

The question of regulatory harmonization versus jurisdictional competition presents familiar tradeoffs.[190] In a first analysis, regulatory competition across jurisdictions is presumptively optimal for a handful of interconnected reasons.[191] First, a one-size-fits-all approach is inappropriate when jurisdictions have heterogeneous populations and local governments have the best access to information concerning their own residents' policy preferences.[192] Second, the possibility of experimentation across jurisdictions produces information about how different regulations perform relative to one another, which facilitates learning.[193] Third, the

189 Harmonization is of course a matter of degree, running across a spectrum from adopting fully identical regulation to more limited measures such as mutual recognition of regulatory variations. *See* Alan O. Sykes, *Regulatory Competition or Regulatory Harmonization? A Silly Question?*, 3 J. INT'L ECON. L. 254, 257 (2000).

190 Domestically, at least in the United States, the debate between these two strategies can be viewed as a question of federalism, or the proper allocation of regulatory authority between federal and state governments. At the international level, it falls under what is sometimes referred to as the principle of "subsidiarity," and turns on the extent to which regulations are harmonized across national borders through treaties or similar informal agreements. *See* Neil S. Siegel, *Collective Action Federalism and Its Discontents*, 91 TEX. L. REV. 1936, 1937 (2013); Kenneth W. Abbott & Duncan Snidal, *Hard and Soft Law in International Governance*, 54 INT'L ORG. 421, 423 (2000).

191 *See* Paul Stephan, *Regulatory Competition and Anticorruption Law*, 53 VA. J. INT'L L. 53, 55 (2012).

192 *See* Roberta Romano, *For Diversity in the International Regulation of Financial Institutions: Critiquing and Recalibrating the Basel Architecture*, 31 YALE J. ON REG. 1, 5–6 (2014).

193 *See* Stephan, *supra* note 191.

option of exit reduces the costs of regulatory error.[194] In sum, regulatory competition minimizes the scale of regulatory failure to a single jurisdiction that residents may opt out of, while at the same time leaving other jurisdictions free to opt in to successful regulations through imitation.[195]

Regulatory competition becomes problematic, however, when activities within one jurisdiction impose external costs or benefits on other jurisdictions. When an activity taking place in the home jurisdiction imposes a negative externality on foreign jurisdictions, the home jurisdiction has an incentive to underinvest in deterring the conduct at issue. In turn, this incentive may produce a race-to-the-bottom dynamic, in which the opportunity for exit drives activity to jurisdictions with less stringent regulation, and jurisdictions compete to provide inefficient regulatory laxity.[196] This race-to-the-bottom dynamic can potentially be remedied if jurisdictions agree to harmonize their regulations and adopt uniform rules that create a "level playing field."[197] In the reverse case, where an activity in the home jurisdiction would impart a positive externality on foreign jurisdictions, the home jurisdiction will rationally underinvest in producing the activity at issue absent harmonization.[198]

194 *See* ALFRED O. HIRSCHMAN, EXIT, VOICE AND LOYALTY: RESPONSES TO DECLINE IN FIRMS, ORGANIZATIONS, AND STATES 4, 21–28 (1970); Roberta Romano, *Against Financial Regulation Harmonization: A Comment* 18 (Yale Law & Econ., Research Paper No. 414, 2010); Charles K. Whitehead, *Destructive Coordination*, 96 CORNELL L. REV. 323, 326–27, 336 (2011).

195 *See* Wallace E. Oates & Robert M. Schwab, *Economic Competition Among Jurisdictions: Efficiency Enhancing or Distortion Inducing?*, 35 J. PUB. ECON. 333, 333–35 (1988); Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416, 418–19 (1956).

196 *See* Stephan, *supra* note 191.

197 See Romano, *supra* note 192, at 32–33.

198 One form in which the positive externality case will often arise is when there are benefits to developing common standards that increase the network of parties that are "using the same [regulatory] language." *See* John C. Coffee, *Law and Regulatory Competition: Can They Co-exist?*, 80 TEX. L. REV. 1729, 1732 (2002); *see also* DREZNER, *supra* note 168, at 43.

At the theoretical level, the question of harmonization versus competition is indeterminate.[199] For any area of regulation, whether more harmonization or diversity is optimal at the margin depends on whether the benefits of regulatory competition are outweighed by the costs of cross-jurisdictional externalities in that particular context.[200] However, as markets become more integrated across jurisdictions the incidence of inter-jurisdictional externalities tends to increase, making the case for harmonization stronger.

Insurance poses an intriguing example of the jurisdictional boundary problem. At both the domestic and international tiers, there is much more regulatory competition when it comes to insurance than is the case for other financial industries. However, over the past dozen years, the integration of insurance markets has increased and the industry has grown to resemble and become interconnected with the broader financial system. Thus, a pressing policy question at both tiers is whether it is desirable to build on recent reforms to take bold new steps to harmonize insurance rules so that they more closely resemble those governing the rest of the financial system.

This Part IV.A explores the tradeoffs at each tier and argues that the case for greater harmonization is quite strong at the domestic level but less so internationally. An implication is that the current structure of the FIO, which is designed to directly pursue international harmonization as an indirect means to domestic harmonization, is flawed. Scholarship that regards the internationalist orientation of the FIO as a positive institutional feature is therefore misguided, because only a relatively small subset of harmonization measures that are desirable at the domestic level are also optimal at the international level.

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199 Neither does introducing the possibility of rent-seeking and regulatory capture by organized interests tilt the scales definitively one way or the other. *See* DENNIS C. MUELLER, PUBLIC CHOICE III, 333–59 (2003); Stephan, *supra* note 191, at 56–57.

200 *See* Stephan, *supra* note 191, at 57.

1. Domestic Harmonization

Given recent market developments in the insurance industry, it is clear that some degree of regulatory harmonization is desirable relative to the state-centered status quo that has tentatively been preserved by Dodd-Frank's insurance-related reforms. As an initial matter, two arguments perennially aired in defense of the state-centered system no longer apply. Proponents of the status quo often assert that the unique regulatory structure for insurance is justified because insurance is *sui generis* among financial services.[201] However, this argument falls short now that insurance companies provide many products that are economically indistinguishable from those offered by banks and other financial services firms, all of which are subject to substantial federal regulation. A second common claim made in support of the state-led system is that it has had a relatively successful historical track record in keeping insurance companies solvent.[202] But after the 2008 Crisis,

201 Faisal Baluch, Stanley Mutenga & Chris Parsons, *Insurance Systemic Risk and the Financial Crisis*, 36 GENEVA PAPERS 126, 126 (2011) ("Historically, there has been a distinct separation between insurance, banking and other financial markets in most countries, so that events in one sphere usually had little effect on the other."); MARK BOOZELL, ILL. DEP'T OF INS., FUTURE OF THE BUSINESS DISCIPLINES, REGULATION AND OVERSIGHT OF THE U.S. INSURANCE MARKET PLACE 3 (2009), http://www.naic.org/documents/topics_white_paper_pia.pdf [http://perma.cc/G7RZ-HBL7] ("[I]nsurance is not simple, it is complex. There are critical material differences that apply to the business of insurance that do not apply in other financial services areas."); GENEVA ASS'N, KEY FINANCIAL STABILITY ISSUES IN INSURANCE 1 (2010) ("The main findings of this research report are the following: Banks and insurers played markedly different roles in the financial crisis[;] The insurance business model has specific features that make it a source of stability . . . .")

202 *See supra* note 7; *see also* Lissa Lamkin Broome, *A Federal Charter Option for Insurance Companies: Lessons from the Bank Experience*, *in* BANKING LAW: FINANCIAL MODERNIZATION AFTER GRAMM-LEACH-BLILEY 203, 207 (Patricia A. McCoy ed., 2002) ("Many insurance trade associations, however, have lined up in opposition to [increased federalization] . . . [by] touting the responsive and responsible regulation of insurance at the state level . . . ."); BOOZELL, *supra* note 201, at 2 (urging

this point loses much of its force: during the Crisis, the entire private mortgage and monoline insurance sectors collapsed, and large multi-line and life insurers, such as AIG, Hartford Financial, and Lincoln Financial had to resort to emergency federal aid.

The case for harmonization is also strengthened now that insurance markets have become integrated on a national scale. This is reflected by the fact that the average state licenses over 1,000 out-of-state insurers, a figure representing close to ninety percent of insurers in the average state.[203] The majority of premiums paid in every

that federal reform of insurance should be limited in light of "the current track record that state insurance commissioners have demonstrated in their regulation of the U.S. insurance marketplace"); David A. Sampson, President & CEO, Prop. Cas. Insurers Ass'n of Am., Remarks at NAIC Globalization Conference (May 14, 2014), http://www.pciaa.net/docs/default-source/pci-speaks/das_naic_remarks_051414.pdf [http://perma.cc/B2FN-GLVN] ("The insurance sector has a remarkable track record of success in protecting consumers; and regulators should be proud of their accomplishments."); FED. INS. OFFICE, REPORT ON MODERNIZING INSURANCE REGULATION: TESTIMONY OF ROBERT RESTREPO (Feb. 3, 2014), http://financialservices.house.gov/uploadedfiles/hhrg-113-ba04-wstate-rrestrepo-20140204.pdf [http://perma.cc/4JF4-VEYW] ("The U.S. has the largest and most diverse insurance market in the world, with a 150 year track record of comprehensive state regulation protecting consumers. The insurance sector has been stable throughout the last several financial crises, and despite a confluence in the last decade of record storms, market contractions and regulatory changes."); *Capital Markets Regulatory Reform: Strengthening Investor Protection, Enhancing Oversight of Private Pools of Capital, and Creating a National Insurance Office: Hearing Before the H. Comm. on Fin. Serv.*, 111th Cong. 170 (2009) (statement of Spencer M. Houldin, Independent Insurance Agents & Brokers of America) ("State insurance regulation has a long and stable track record of accomplishment—especially in the areas of solvency regulation and consumer protection—but its benefits and merits have never been more apparent.").

[203] *See Insurance Companies by State*, INS. INFO. INST., http://www.iii.org/publications/a-firm-foundation-how-insurance-supports-the-economy/a-50-state-commitment/insurance-companies-by-state [http://perma.cc/WJ8A-X86P] (last visited Nov. 7, 2015).

state are also on policies written by out-of-state insurers.[204] And the market share of large, nationwide insurance firms has been increasing across all product lines.[205]

Maintaining regulatory diversity amidst a consolidating national market has led to duplicative regulations that needlessly raise compliance costs, create barriers to entry that disadvantage smaller firms, and delay the introduction of new products.[206] Licensing requirements, for example, vary from state to state on minutia concerning the color of paper for applications and the manner in which they are to be stapled, as well as with respect to more onerous requirements, such as background checks for agents.[207] Insurers are also required to navigate a battery of post-licensing requirements that differ widely across states.[208] Not surprisingly, these costs add up. One comprehensive survey of the life insurance industry found that sixty-five percent of regulatory compliance costs concerned "front-end" regulation, due largely to the multiplicity of licensing regimes.[209] A more recent econometric study estimates that a move to single-jurisdiction regulation would reduce the average operating costs of insurers by twenty-six percent.[210] The FIO Modernization Report is also consistent with these

204 *See* MARTIN F. GRACE & ROBERT W. KLEIN, ALTERNATIVE FRAMEWORKS FOR INSURANCE REGULATION IN THE UNITED STATES 5–8 tbls.3 & 4 (2009).

205 *See* Klein, *supra* note 120, at 16–19, 20–22.

206 *See* BAIR, *supra* note 19, at 51.

207 *See* Andrew G. Simpson, *Leave-No-State-Regulation-Behind*, INS. J. (Sept. 6, 2004), http://www.insurancejournal.com/magazines/editorsnote/2004/09/06/45946.htm [http://perma.cc/F2K6-QGTG].

208 *See* GOV'T ACCOUNTABILITY OFFICE, STATE INSURANCE REGULATION: EFFORTS TO STREAMLINE KEY LICENSING AND APPROVAL PROCESSES FACE CHALLENGES (2002), http://www.gao.gov/new.items/d02842t.pdf [http://perma.cc/YMS5-5SM6]; *see also* Elizabeth F. Brown, *Will the Federal Insurance Office Improve Insurance Regulation?*, 81 U. CIN. L. REV. 551, 561–62 (2013).

209 *See* BAIR, *supra* note 19, at 34, 104.

210 J. Tyler Leverty, *The Cost of Duplicative Regulation: Evidence from Risk Retention Groups*, 19 J. RISK & INS. 105, 113 (2011).

studies; it finds that the complexities of the United States' multi-jurisdictional system increase annual operating costs for property and casualty insurers by $7.2 billion and for life insurers by $5.7 billion.[211]

The convergence of insurance with the broader financial sector also means that state insurance supervisors can affect the stability of the entire U.S. financial system in an uncoordinated, incoherent manner that potentially poses large external costs. This may take the form of state regulatory decisions that make a systemic crisis more likely ex ante, or ex post efforts to manage a crisis once it appears. An example of the former phenomenon is evident in the success that states such as Vermont and South Carolina have had in acting as "havens" that attract insurance companies by diluting important capital requirements, creating a race-to-the-bottom dynamic that reduces the stability of the industry nationwide.[212] State insurance supervisors also played a significant role during the 2008 Crisis. When the NYID took emergency measures in early 2009 to split up MBIA, which was then the country's largest monoline insurer, it effectively set national policy for backstopping municipal debt markets while at the same time exposing Too Big to Fail banks that held MBIA's CDS to substantial counterparty risk.[213] The NYID nearly made an even more momentous decision during the financial crisis by approving a $20 billion loan from AIG's state life insurance subsidiaries to the parent holding company, which would have gone through were it not subsequently preempted by

211 *See* FIO MODERNIZATION REPORT, *supra* note 10, at 5.

212 For its efforts, tiny Vermont became the state with the most domestically licensed insurers, with more than 560 insurers based in the state as of 2006. Lynnley Browning, *Vermont Becomes "Offshore" Insurance Haven*, N.Y. TIMES (Apr. 4, 2007), http://www.nytimes.com/2007/04/04/business/04vermont.html?pagewanted=print [http://perma.cc/MB4X-TA3R]; *see also* KOIJEN & YOGO, *supra* note 29.

213 *See supra* note 86 and accompanying text.

the Treasury Department's bailout.[214] In turn, the Treasury's decision to indirectly support AIG's state-regulated life insurance units by bailing out the parent holding company was at least in part intended to prevent the risk of defaults cascading across state insurance guaranty funds, a scenario that state regulators would have had difficulty addressing in a coordinated or effective manner.[215] When market integration means that the interventions of state supervisors can in effect set national policy during a crisis, there is a powerful case for harmonization.

Despite its efforts to mitigate these costs of regulatory diversity while maintaining the current state-centered system, the NAIC cannot credibly claim to be up to the task. As a voluntary organization, the NAIC is unable to compel adoption of its model laws, and large market states—such as New York, California, and Florida—have opted out of important rules, including reciprocity agreements on licensing requirements.[216] The incomplete implementation of the NAIC's harmonization programs to date is also evidenced by the billions of dollars in redundant compliance costs identified in the studies referenced above. Perhaps most importantly, because the NAIC is a private, industry-funded association that sits uneasily in a grey area between lobbyist group and quasi-regulator, its commitment to addressing systemic risk by developing stringent solvency regulations is questionable.[217] The FIO's Modernization Report avoids recommending sweeping federalization of insurance regulation by essentially asking the NAIC to do a better job

214 *See* David E. Wood, *Is it Time to Regulate the Insurance Industry?*, ENFORCE, Apr. 2009, at 17, 17–20.

215 *See* Merkel, *supra* note 72.

216 *Producer Licensing and NARAB II*, CIPR NEWSL. (Nat'l Ass'n of Ins. Comm'rs & Ctr. for Ins. Policy & Research, Kansas City, Mo.), Apr. 2012, at 16, http://www.naic.org/cipr_newsletter_archive/vol3_prod_licensing_narab2.htm [http://perma.cc/J5HR-F724].

217 *Cf.* Stephen G. Fier & Andre P. Liebenberg, *Market Reaction to Potential Federal Regulation in the Insurance Industry*, 36 J. INS. ISSUES 1 (2013) (finding a negative market reaction to proposed federal solvency rules for certain insurers, which are the NAIC's primary constituency).

and telling states to "try harder" to coordinate on uniform standards[218] but the NAIC simply lacks the institutional capacity to meet these goals.

a. Evaluating Possible Harmonization Models

Assuming the need for some degree of greater harmonization beyond the status quo, the full gamut of options can be reduced to four general models, some of which have been embodied in previously proposed legislation. (1) The broadest form of harmonization, exemplified by the failed Insurance Consumer Protection Act of 2003 ("ICPA"),[219] would delegate regulation to a federal agency with plenary authority over all areas of insurance, just as the U.S. Commodity Futures Trading Commission ("CFTC") regulates commodity futures transactions on a national scale. (2) A more limited variation of this approach, illustrated by the State Modernization and Regulatory Transparency ("SMART") Act proposed in 2004,[220] would carve out particular substantive areas of insurance regulation to be subject to preemptive federal rules imposed nationwide, while leaving the remainder to the states. (3) A commonly proposed alternative that would allow for even more regulatory diversity is for an optional federal charter ("OFC"), which would give insurers the choice to either opt in to a single federal regulatory regime or remain subject to the diverse set of state rules.[221] (4) A final prominent idea, which would provide the greatest degree of regulatory competition and is analogous to the Delaware model for corporate

218 FIO MODERNIZATION REPORT, *supra* note 10, at 8–10.

219 *See* Insurance Consumer Protection Act of 2003, S. 1373, 108th Cong. (2003).

220 *See* The State Modernization and Regulatory Transparency Act (SMART Act) Discussion Draft, N. AM. SEC. ADM'RS ASS'N (Sept. 24, 2004), http://www.nasaa.org/wp-content/uploads/2011/08/130-SMART.pdf [http://perma.cc/LEW8-XW7H].

221 *See, e.g.*, National Insurance Act of 2006, S. 2509, 109th Cong. (2006). The Paulson Plan also recommended an OFC in 2008. PAULSON PLAN, *supra* note 119, at 10–11.

charters, would allow for a single-state license to preemptively govern an insurer's activities nationwide.[222] A widely used distinction between two general types of insurance regulation—one directed at the "market conduct" of insurers, the other concerning their solvency—suggests that a mixed approach would strike the best balance between regulatory competition and harmonization. Specifically, Model (2) is most appropriate for solvency regulation, and Model (3) or (4) for market conduct rules.

Market conduct regulations are typically understood as a form of consumer protection; they cover a vast area, including licensing and post-licensing requirements for agents and insurers, price and rate setting in certain markets, processes for product approval, and restrictions on how policies are underwritten and marketed.[223] Regulatory diversity in market conduct rules imposes costs relating to redundant regulations, compliance with slightly different regulations, and opportunistic fees and taxation of foreign insurers. This set of cross-jurisdictional problems is primarily a question of streamlining to obtain positive network externalities. Therefore, for market conduct regulations, a reasonable case can be made for either an OFC or a single-state license regime, both of which preserve wide latitude for regulatory competition while offering the efficiencies of harmonization.

Solvency regulations aim to prevent insurance firms from failing and to provide rules for efficiently restructuring them should failure occur; they consist of quantitative capital and reserve requirements, prudential oversight rules for insurance supervisors, guarantee funds that pay policy claims for otherwise insolvent insurers, and financial disclosure requirements.[224] As the experience with states like Vermont loosening capital requirements to operate as insurance havens suggests, jurisdictional competition on

222 *See* Butler & Ribstein, *supra* note 19, at 14–20.

223 *See* GRACE & KLEIN, *supra* note 204, at 14–15.

224 *See id.* at 13–14.

solvency regulations is more susceptible to a race-to-the-bottom dynamic than is the case with market conduct rules. The momentous but arguably erratic interventions of the NYID during the 2008 Crisis also demonstrate that, in managing the failure of large insurance companies, state regulators can have an outsized influence on the stability of the national financial system. In light of these negative inter-state externalities, the most effective response is to follow the SMART Act model and substantially restrict regulatory competition in this area by administering preemptive solvency requirements at the federal level.

i. Market Conduct Regulation

Proponents of an OFC draw by analogy on a similar system of dual chartering in banking.[225] Under the dual charter system, banks may either be chartered in a particular state, or chartered nationally and subject to supervision by the federal Office of the Comptroller of the Currency. The advantage of the OFC proposal is that it retains regulatory competition among states, while allowing firms to choose a harmonized federal package of regulations if that is perceived to be more efficient. Thus, to the degree that multiplicative state market conduct regulation is simply wasteful rather than valuably calibrated to local conditions of each state, consumers can benefit if insurers are able to opt in to a single set of federal rules.[226] Although banks have been able to switch between state and national charters with

225 *See* BAIR, *supra* note 19, at 2–4; GRACE & KLEIN, *supra* note 204, at 19–22; Hal Scott, *Option Federal Chartering of Insurance: Design of a Regulatory Structure* (Harvard Pub. Law, Working Paper No. 07-05, 2007), http://www.law.harvard.edu/programs/about/pifs/research/publications/1scott.pdf [http://perma.cc/K2W7-XZ8J]; Scott E. Harrington, *Federal Chartering of Insurance Companies: Options and Alternatives for Transforming Insurance Regulation* (Networks Financial Institute, Policy Brief No. 206-PB-02, 2006), http://www2.indstate.edu/business/nfi/leadership/briefs/2006-PB-02_Harrington.pdf [http://perma.cc/8YPC-YAZN].

226 *See* Scott, *supra* note 225, at 6–8; GRACE & KLEIN, *supra* note 204, at 19–21.

relative ease, one criticism of OFC proposals is that switching between charters may be particularly costly for insurers relative to banks, and federal regulators will be able to leverage their position to make the "optional charter" a false choice.[227] Others proceed from the opposite premise and claim that the ability of insurers to move between state and national charters will give them leverage to push regulators into a competitive loosening of regulations.[228] As these opposing concerns make clear, the question is one of balance. The limited OFC proposed here strikes a sensible one: it retains some degree of regulatory competition by allowing insurers to opt in to harmonized market conduct regulations, which are "ripe for national standards,"[229] while at the same time reserving solvency regulations to preemptive federal rules because they pose a greater threat of race-to-the-bottom competitive deregulation.

The single-state licensing proposal is a creative approach that is arguably superior to an OFC because it provides the benefits of both pure harmonization and pure competition along some dimensions.[230] On one hand, insurers would only have to comply with a single, harmonized set of regulations promulgated under the particular state license they chose, thus eliminating the redundancies and transaction costs plaguing the current system.[231] At the same time, the option to exit and choose among over fifty competing packages of regulation mitigates the concern associated with the OFC

227 *See* Robert Detlefsen, *Dual Income Chartering: Potential Consequences*, *in* THE FUTURE OF INSURANCE REGULATION IN THE UNITED STATES 97, 102–03 (Martin F. Grace & Robert W. Klein eds., 2009); Broome, *supra* note 202, at 220–21; *but see* Harrington, *supra* note 225, at 22 (describing how "[s]tate banks have thrived under dual chartering").

228 *See* BAIR, *supra* note 19, at 72–74 (stating but not adopting this argument).

229 *See* Danielle F. Waterfield, *Insurers Jump on Train for Federal Insurance Regulation,* 9 CONN. INS. L.J. 283, 320–28 (2003) (using the phrase to describe certain market conduct regulations such as licensing requirements).

230 *See generally* Butler & Ribstein, *supra* note 19.

231 *Id.* at 14–20.

that a federal charter would effectively crowd out state regulations in practice. A single-state license regime even subsumes the OFC option in a sense, because a federal license could also be created that competes alongside those of the states.[232] Because the single-state license framework for insurance parallels calls to apply the Delaware model of competitive state chartering to securities regulations,[233] the same objections are raised in both contexts. Namely, critics argue that the analogy to Delaware corporate law breaks down because corporate governance rules are rightly designed to maximize firm value for shareholders, whereas securities laws seek to correct information asymmetries between investors and firms issuing securities, not to maximize the shareholder value of those firms.[234] Likewise, skeptics of a single-state license reason that market conduct regulations seek to correct information asymmetries between consumers and insurers selling policies, not maximize the return to insurance company shareholders.[235] Again, the question is one of balance. For those with greater skepticism over the merits of regulatory competition in the area of consumer protection,[236] an OFC framework is preferable because it provides somewhat more limited regulatory competition than a single-state license regime. For advocates of a Delaware-style regime for securities regulation, who argue that competition among jurisdictions would provide a signal of issuer-transparency for investors, a single-state

232 Henry N. Butler & Larry E. Ribstein*, The Single-License Solution*, 31 REG. 36, 42 (2008).

233 *See* Stephen J. Choi & Andrew Guzman, *Portable Reciprocity: Rethinking the International Reach of Securities Regulations*, 71 S. CAL. L. REV. 903, 935 (1998); Roberta Romano, *Empowering Investors: A Market Approach to Securities Regulation*, 107 YALE L.J. 2359, 2388–93 (1998).

234 *See* Coffee, *supra* note 198, at 1730–35; Merritt B. Fox, *Retaining Mandatory Disclosure: Why Issuer Choice is not Investor Empowerment*, 85 VA. L. REV. 1335, 1393 (1999).

235 *See* Daniel Schwarcz, *Regulating Insurance Sales or Selling Insurance Regulation?: Against Regulatory Competition in Insurance*, 94 MINN. L. REV. 1707, 1737 (2010).

236 *See generally id*.

licensing regime in insurance consumer protection would be more efficient.

ii. Solvency Regulation

The analysis above indicates that a state race-to-the-bottom in capital requirements and decentralized crisis management can impose serious inter-state externalities, which make mandatory, rather than optional, federal solvency rules advisable.

Along with the OFC model, preemptive federal solvency regulation would draw on previously proposed insurance legislation, along with regulatory mechanisms that already apply to banking. As contemplated by the SMART Act, both state and federally chartered insurers could be made subject to federal minimum requirements for capital and liquidity levels and mandatory financial reporting to federal insurance supervisors.[237] For larger insurers, at least, this would not necessarily imply a drastic change. Insurance conglomerates that were structured as FHCs were previously made subject to capital requirements and supervision by the Federal Reserve pursuant to the GLB Act, and Dodd-Frank brings that oversight to insurers that are not FHCs yet nonetheless are considered systemically important.[238] In contrast to the current framework, federal solvency and resolution rules should not be limited to a handful of Too Big to Fail insurers, because the contemporaneous collapse of nearly all private mortgage and monoline insurance companies illustrates that a cluster of firms can be collectively "too numerous to fail."

The second major piece of federal solvency regulation would be to displace state guarantee funds with a common federal resolution authority. Such an arrangement is

237 *See* SMART Act Discussion Draft, *supra* note 220; GRACE & KLEIN, *supra* note 204, at 18–19 (discussing the option of federal minimum standards); Harrington, *supra* note 225, at 25–28 (same); Schwarcz, *supra* note 235, 1780–87 (same).

238 *See supra* note 131 and accompanying text.

currently in place in banking regulation, where the FDIC has authority over failed banks with federally insured deposits whether they are established pursuant to a state or national charter.[239] As with capital requirements and supervision, Dodd-Frank already partially incorporates this proposal with respect to systemically important insurers as part of the FDIC's new Orderly Liquidation Authority. Under the OLA, the FDIC will take into receivership any insolvent insurance company of systemic importance if a state insurance department does not take sufficient measures to do so itself within ninety days of the institution's failure.[240] A federal resolution authority for insurance companies would remove this first-instance delegation to state insurance funds and complement federal solvency supervision and capital requirements.[241]

Although the analysis above evaluates harmonization models at an abstract level, each reform draws on existing regulatory structures that are in place for banking or other financial services, which could be emulated by the FIO if it is given a broader mandate. The analysis also rules out two regimes as strictly inferior. First, the status quo of pure regulatory competition is patently dysfunctional, and would be improved by some degree of harmonization across state jurisdictions. Second, it is unwise to move to the opposite extreme of complete harmonization by granting the FIO plenary authority over insurance regulation. The most effective way forward is to leverage the FIO as a platform for a mixed approach, which consists of preemptive federal solvency rules but retains a degree of regulatory competition through optional charters governing market conduct rules.

239 *See* Federal Deposit Insurance Improvement Act of 1991 (FDICIA), Pub. L. No. 102-242, 105 Stat. 2236 (codified in scattered sections of 12 U.S.C. (2012)).

240 Dodd-Frank § 204 (providing for the FDIC's new OLA).

241 *See* Harrington, *supra* note 225, at 21.

2. International Harmonization

The 2008 Crisis revealed the depth of the insurance industry's interconnection with the global financial system, and as a consequence, cross-border cooperation on insurance regulation has appeared on the post-Crisis reform agenda.[242] At the international level, however, the dilemma of regulatory competition versus harmonization raises a number of threshold considerations that are not present in the domestic context, all of which tend to favor maintaining a greater sphere of regulatory competition. The first is the familiar point that obtaining meaningful enforcement of international agreements is more difficult than it is for federal regulations, leaving the actual extent of cross-border harmonization uncertain.[243] Second, the heterogeneity of populations and their preferences is typically greater among countries than within them, which also tends to reduce the benefits of internationally uniform policies.[244] Third, even in our era of globalization, market integration remains deeper within countries than among them and therefore the incidence of market externalities is greater domestically.[245] Fourth, the cost of regulatory failure is magnified by international agreements to be global in scale.[246] Fifth, and somewhat speculatively, regulatory failure as a result of interest group capture is arguably more likely at the

242 *See supra* Parts II.B, III.B.

243 *See generally* JACK GOLDSMITH & ERIC POSNER, THE LIMITS OF INTERNATIONAL LAW (2005) (analyzing the barriers to effective enforcement of international legal agreements).

244 *Cf.* Alberto Alesina & Enrico Spolaore, *On the Number and Size of Nations*, 112 Q.J. ECON. 1027, 1027–29 (1997).

245 *See* ORG. FOR ECON. CO-OPERATION & DEV., OECD FACTBOOK 2014: ECONOMIC, ENVIRONMENTAL AND SOCIAL STATISTICS 76–77 (2014) (providing statistics on the relative volumes of inter- and intra-state trade), http://www.oecd-ilibrary.org/economics/oecd-factbook_18147364 [http://perma.cc/J582-669H].

246 *See* Romano, *supra* note 194, at 5, 17–18.

international level, where political organizations operate with less transparency and democratic accountability.[247]

Taken together, the unique features of international regulatory cooperation that disfavor harmonization carry at least one important implication: contrary to what many commentators suggest or anticipate, the FIO should not use its authority to negotiate international agreements as a springboard for achieving domestic regulatory uniformity.[248] Rather, the FIO should follow the opposite approach and only pursue international harmonization of those rules that: (1) meet the prior test of making sense as domestic reforms; and, in addition, (2) are not particularly susceptible to the problems that often accompany international law-making.

This point applies most directly to the international harmonization of solvency standards and capital requirements for insurers, which is currently being pursued in multiple venues. In particular, the EU-U.S. Dialogue Project is working to close the gap between U.S. insurance regulations and the EU's new Solvency II regime, and the FSB is also formulating binding capital requirements for a set of multinational insurance groups that it has designated as G-SIIs.[249] Although the preceding section recommended the development of uniform federal solvency rules, the case for aggressively pursuing harmonization in this area at the international level implicates several of the concerns raised above and is therefore much weaker.

A primary reason is the experience with harmonizing solvency requirements for banks under the international Basel I and Basel II rules, which provides a powerful precedent and cautionary tale. Most notably, the bulk of the evidence indicates that the Basel rules were not successfully enforced in a manner that mitigated the race-to-the-bottom dynamic in banks' risk-taking, as was intended by the

247 *See* Paul B. Stephan, *Accountability and International Lawmaking: Rules, Rents and Legitimacy*, 17 NW. J. INT'L L. & BUS. 681, 699 (1997).

248 *See, e.g.*, Brown, *supra* note 7, at 583.

249 *See supra* Part III.B.2.

advanced economies that were parties to those agreements.[250] Nor does it appear that non-signatory countries that purported to apply the Basel rules engaged in anything more than "mock compliance."[251] Moreover, Basel I and II represent an example of regulatory failure that was made international in magnitude. This is because the risk-weighting mechanisms in those agreements unintentionally invited regulatory arbitrage, herded banks into assets with under-appreciated risks, and amplified banks' susceptibility to movements in the business cycle.[252] Lastly, it is also plausibly asserted that the entire process was undermined by industry capture.[253]

Solvency II is explicitly modeled on the Basel frameworks,[254] and capital requirements formulated by the FSB for G-SIIs will no doubt be to a significant extent as well.[255] But there are no characteristics unique to insurance that indicate such a framework would proceed noticeably more effectively in the insurance context than it did for banks. In response to the Basel II experience, Dodd-Frank reserves the authority of federal regulators to depart from Basel III's requirements for banks where they believe doing

250 *See* Romano, *supra* note 192, at 103–17; Jeffrey Atik, *Basel II: A Post-Crisis Post-Mortem*, 19 TRANSNAT'L L. & CONTEM. PROBS. 731, 733 (2011).

251 *See* ANDREW WALTER, GOVERNING FINANCE: EAST ASIA'S ADOPTION OF INTERNATIONAL STANDARDS 32 (2008) (referring to the "mock compliance" with Basel II standards).

252 *See generally* John F. Rosato, *Down the Road to Perdition: How the Flaws of Basel II Led to the Collapse of Bear Stearns and Lehman Brothers*, 17 CONN. INS. L.J. 475 (2011).

253 *See, e.g.*, Ranjit Lall, *Why Basel II Failed and Why Any Basel III Is Doomed* (Glob. Econ. Governance Programme, Working Paper No. 2009/52, 2009), http://www.globaleconomicgovernance.org/sites/geg/files/Lall_GEG%20WP%202009_52.pdf [http://perma.cc/6X8E-GRV2].

254 *See* Johan Jacobs & Gary van Vuuren, *Lessons Learnt from the Deficiencies of the Basel Accords as they Apply to Solvency II*, 6 J. ECON. & FIN. SCI. 309, 311 (2013).

255 *See* FSB, *supra* note 183, at 1.

so is advisable.[256] Likewise, the FIO should pursue negotiations on international solvency standards with an eye toward maintaining a substantial degree of discretion in their implementation, and also avoid using commitments to international harmonization agreements as an instrument to bind states to a common set of solvency rules.

A more modest effort at harmonization is the FSB's project to develop internationally harmonized resolution plans for G-SIIs.[257] Resolution plans, often referred to as "living wills," are documents that specify a financial institution's corporate structure, identify its counterparties, and provide a roadmap for a hypothetical emergency restructuring. In light of the disorderly failure of large, interconnected financial firms such as Lehman Brothers during the 2008 Crisis, Dodd-Frank has required systemically important domestic firms to develop living wills.[258] As AIG dramatically showed, the cross-border resolution of multinational institutions during the Crisis was no less chaotic than it was domestically.

The Dodd-Frank resolution plans could serve as the FIO's template for negotiating cross-border harmonization of living wills for multinational insurance groups, which is likely to be a useful exercise.[259] If countries can coordinate to standardize the form of resolution plans that multinational firms must draft, they may streamline regulatory compliance across borders and thereby capture the positive externalities of using a common "regulatory language."[260] In addition, international harmonization of living wills could facilitate

256 Dodd-Frank §§ 171, 939A, 12 U.S.C. § 5371, 15 U.S.C. § 78o-7 (2012).

257 *See* FSB, *supra* note 183 and accompanying text.

258 Dodd-Frank § 165(d), 12 U.S.C § 5365(d) (2012).

259 *See* BASEL COMM. ON BANKING SUPERVISION, REPORT AND RECOMMENDATIONS OF THE CROSS-BORDER BANK RESOLUTION GROUP 15 (2010), http://www.bis.org/publ/bcbs169.pdf [https://perma.cc/RMM6-5ARP] ("Coordination among [international resolution] proceedings has been limited, at best.").

260 *See supra* note 196 and accompanying text.

cooperation during emergency cross-border resolutions by allowing regulators in different countries to operate from a common factual understanding.[261] Because harmonization of resolution plans seeks to capture the positive externalities of standardization, they can be understood as coordination problems in game theory terms,[262] and therefore should present less compliance issues than do agreements to reduce negative race-to-the-bottom externalities such as the Basel Accords.[263] Finally, unlike the costly regulatory directives of the Basel Accords, resolution plans are essentially information disclosures. As a result, they are not likely to encourage regulatory arbitrage or herd firms into risky avoidance strategies, and the threat of regulatory failure is less pronounced.

A final area of insurance regulation harmonization that is currently underway consists of a variety of efforts by the IAIS—through its Insurance Core Principles revisions, Joint Forum participation, and ComFrame—to revise and develop a myriad of codes and standards documents that outline best practices for insurance supervisors.[264] Like the FSB's

261 *See* Emilious Avgouleas, Charles Goodhart & Dirk Schoenmaker, *Bank Resolution Plans as Catalyst for Global Financial Reform*, 9 J. FIN. STABILITY 210, 215 (2013); Richard J. Herring, *The Central Role of Resolution Policy in Dealing with Systemically Important Financial Institutions* (Wharton Fin. Insts. Ctr., Working Paper Series No. 11-71, 2011), http://fic.wharton.upenn.edu/fic/papers/11/11-71.pdf [http://perma.cc/74ES-XCUF].

262 Richard McAdams, *Beyond the Prisoner's Dilemma*, 82 S. CAL. L. REV. 209, 222, 230 (2009) (arguing that agreement on common standards takes the form of a battle-of-the-sexes coordination game); Walter Mattli & Tim Buthe, *Setting International Standards: Technological Rationality or Primacy of Power?*, 56 WORLD POL. 1, 9 (2003).

263 *See* Ethan B. Kapstein, *Resolving the Regulator's Dilemma: International Coordination of Banking Regulations*, 43 INT'L ORG. 323, 323–24 (1989) (arguing that the Basel Accords created a prisoner's dilemma, which Kapstein refers to as a "regulators dilemma"); DANIEL TARULLO, BANKING ON BASEL: THE FUTURE OF INTERNATIONAL FINANCIAL REGULATION 53, 200 (2008) (noting that "race to the bottom" concerns animated the Basel Committee's capital adequacy agenda).

264 *See supra* Part III.B.2.

harmonization of living wills, these efforts do not raise intractable enforcement issues or represent a substantial threat of costly regulatory failure in the way that Basel-style capital rules do. On the other hand, it is somewhat difficult to discern what concrete benefits, if any, these efforts will yield. This is because previous generations of codes and standards were merely hortatory documents and pitched at such a high level of abstraction that they did not offer guidance that could be used by regulators in practice.[265] Thus, the greatest danger posed by these otherwise innocuous projects is to overestimate their importance. Regardless of direct impact, though, post-2008 efforts at revising international insurance principles may be indirectly valuable to the extent that they facilitate the development of information-sharing fora, known as international supervisory colleges. Similar to the harmonization of living wills, active cross-border supervisory colleges would allow national regulators to pool expertise and gain a broader perspective on the complex, global institutions that they are supervising.[266]

In summary, the jurisdictional boundaries of insurance regulation are more fragmented than banking and securities rules, both at the domestic and international levels. However, the past decade of convergence means that insurance is no longer less interconnected with the financial system than are other financial services industries. This creates pressure to shift regulatory boundaries at both tiers towards a more harmonized approach. The response to the 2008 Crisis has consisted of considerable institutional

265 *See, e.g.*, *supra* note 168 (citing IAIS CORE PRINCIPLES, *supra* note 165 (quoting Principle No. 12) and IAIS SOLVENCY PRINCIPLES, *supra* note 166 (quoting Principle No. 3.1.1)); *see also* DREZNER, *supra* note 168, at 81–85.

266 *See* COMFRAME WORKING DRAFT, *supra* note 182, at 154–63 (providing guidance on supervisory colleges for internationally active insurance groups); Duncan E. Alford, *Supervisory Colleges: The Global Financial Crisis and Improving International Supervisory Coordination*, 24 EMORY INT'L L. REV. 57, 58 (2010); Kirby, *supra* note 152, at 166–68.

innovation that nonetheless leaves substantive insurance regulation unchanged. A more efficient balance between regulatory competition and harmonization could be obtained by re-orienting the FIO to first formulate a substantial body of federal insurance regulation, and only then pursue cross-border harmonization of a more modest subset of those rules.

B. The Definitional Boundary Problem: Regulation of Legal Form versus Economic Function

The degree of regulatory divergence across jurisdictions represents a kind of literal, geographic boundary problem, but there is a definitional boundary problem that takes place within jurisdictions as well, and it is equally fundamental. The drafting and enforcement of any legal rule necessarily involves drawing a boundary that defines the set of actors and activities to which the rules applies. For many areas of regulation, this is not a particularly profound issue: municipal legislators and park management personnel are not as a practical matter regularly entangled in quandaries over the applicable scope of signs declaring that there shall be "no vehicles in the park."[267] By contrast, financial services often squarely present the definitional boundary problem, because contracts that allocate financial risks are malleable in how they can be characterized, especially relative to contracts relating to physical goods and services.

Definitional boundaries in finance can be characterized as drawn in a "formal" way that retains clear distinctions between traditional legal categories, or in a "functional" manner so that regulatory categories track the economic purpose of the activity at issue. For example, under a functional approach, if a particular contract is sold by an insurance company and is labeled as "life insurance" but

267 *See* H.L.A. Hart, *Positivism and the Separation of Law and Morals*, 71 HARV. L. REV. 593, 607 (1958) (providing the famous "no vehicles" example in his discussion of legal interpretation); *see also* Pierre Schlag, *No Vehicles in the Park*, 23 SEATTLE U. L. REV. 381, 383 n.13 (1999).

functions more like an investment, it should be regulated as a security, not an insurance policy.[268] With a more formal regime, if a firm is established pursuant to a state banking charter and takes deposits, it is to be regulated as a "bank" and subject to the FDIC's deposit guarantees, regardless of whether it also provides insurance or investment services. As the preceding examples illustrate, regulatory definitions can demarcate a set of transactions or operate at the higher level of grouping institutions.

That commercial regulation should follow an entity or activity's economic function rather than its legal form would appear to be a truism and an expression of the uncontroversial principle that applying different laws to like things is arbitrary.[269] The benefit of functional definitions is that they preserve the policy rationale underlying a given rule, and reduce opportunities for market actors to avoid the private cost of a regulation by simply re-labelling an activity's legal form.[270] Not surprisingly, then, calls for a move towards greater functionalism are a staple of legal scholarship on financial regulation.[271]

However, this literature often fails to appreciate that, when pursuing the principle of functional regulation in practice, several problems appear. For one, functional criteria can often be indeterminate and arbitrary themselves.[272] Second, arguing by analogy that different products have similar economic uses can lead to over-inclusive categorizations.[273] Both issues pose a risk of regulatory overlap, in which rules or bureaucratic supervision can be redundant at minimum and possibly so

268 *See* Jackson, *supra* note 8, at 69–70.

269 *See id.* at 65–75; *cf.* LON L. FULLER, THE MORALITY OF THE LAW 33–38 (2d ed. 1964).

270 *See* Jackson, *supra* note 8, at 68, 73.

271 *See, e.g.*, Charles K. Whitehead, *Reframing Financial Regulation*, 90 BOS. U. L. REV. 1, 40–41 (2010); PAULSON PLAN, *supra* note 119.

272 *See* Broome & Markham, *supra* note 8, at 777.

273 *See* Jackson, *supra* note 8, at 74–75.

inconsistent as to work at cross-purposes.[274] A roving functionalism may also preclude the benefits of specialization and accumulation of industry expertise, which formal definitions provide by allowing a single regulator to monitor developments in a particular market or firm over a longer period of time.[275] Most importantly, functional regulation can give rise to a self-defeating dynamic: wherever a functional definition sets a new boundary, financial engineers have an incentive to redesign transactions so that they fall outside that boundary, thereby negating the primary advantage that functional regulation provides.[276] In this race, the pace of market innovation is likely to outstrip regulator categories intended to map onto the economic purpose that particular transactions serve, because even functional regulation is typically backward-looking and formulated to address market failures that characterized the immediately preceding crisis. As a result, wielding functional definitions can carry the above-mentioned costs that exacerbate regulatory over-complexity, while at the same time providing only small benefits in terms of the increased proportion of significant activities covered.

The cumulative significance of these tradeoffs is that identifying an undeniable economic commonality across products or firms is not sufficient to justify adopting a functional definitional boundary. Even in the face of market convergence, there will remain a substantial domain where the subtle advantages of formal definitions apply. As a result, optimal definitional boundaries will depart significantly from the pure functional ideal and rest on some middle ground between functional and formal regulation.

Nonetheless, the economic convergence of insurance puts pressure on preexisting definitional boundaries, which take a predominately formalistic approach and trigger a relatively

274 Broome & Markham, *supra* note 8, at 778–79.

275 *See* PAULSON PLAN, *supra* note 119, at 141–42.

276 *See* Goodhart, *supra* note 12.

idiosyncratic set of regulations for financial services falling under the category of "insurance." As in the case of jurisdictional boundaries, Dodd-Frank has left definitional boundaries for insurance at a potential tipping point, because it preserves the status quo under Gramm-Leach-Bliley while at the same time investing regulators with a potentially vast new discretion to take a more functional approach.[277] The discussion below analyzes several areas where the traditional definitions of what constitutes insurance have been put into question by the past decade's wave of convergence, first at the product, then at the firm level.

1. Functional Regulation of Products

An important exception to the formal-institutional framework of the GLB and Dodd-Frank Acts has been attempts to carve out functional regulatory definitions for two financial products commonly sold by insurance companies: annuities and credit default swaps. This sub-section explains how definitional boundaries have been drawn with respect to these products, examines the relevant tradeoffs, and in both contexts cautions against imposing a broadly functional definition of "insurance."

a. Annuities

Annuities are products sold by life insurance companies that have been subject to securities regulation because of their perceived function as investments.[278] Annuities are usually divided into "variable" and "fixed" types. With a variable annuity, the insured contributes an upfront premium payment that is then invested by the insurer, which provides a future stream of periodic payments to the insured based on the performance of a reference portfolio in

277 *See supra* Part III.A.

278 Hasan, *supra* note 24, at 253–54.

which the premium is invested.[279] As a result, variable annuities can be understood to serve as investment products similar to mutual funds, rather than insurance.[280] Fixed annuities, by comparison, are often distinguished from mutual funds and variable annuities because they: (1) provide the insured with a fixed, guaranteed stream of payments; and (2) the insurer does not invest the premiums directly in a reference portfolio held in a "separate account," which insulates losses on the investment from reserves held for other life insurance policies, but instead supports the annuity payments from the return on its general pool of assets.[281]

However, as annuities markets have evolved, these functional distinctions have become blurred. On the one hand, variable annuity policies have begun to offer a variety of riders that provide "guarantees"—in the form of guaranteed minimum income benefits and guaranteed minimum withdrawal benefits—and thereby partially mimic the guaranteed payments provided by fixed annuities.[282] On the other hand, fixed annuities have been developed that offer the insured a portion of the upside above a guaranteed minimum, thus providing the possibility of a variable return based on market performance.

Definitional boundaries concerning annuities have grown more functional over the years, as the SEC has persistently pushed the courts to define an ever greater proportion of policies as "securities" that are subject to the disclosure rules

279 *See* James M. Poterba, *A Brief History of Annuity Markets*, *in* THE ROLE OF ANNUITY MARKETS IN FINANCING RETIREMENT 23–24 (Jeffrey R. Brown ed., 2001).

280 *See* Matt Van Heuvelen, *Duplicative, Confusing, and Legally Inaccurate: The SEC's Attempt to Regulate Fixed Indexed Annuities*, 35 J. CORP. L. 663, 672 (2010).

281 *See* Hasan, *supra* note 24, at 267; Gary O. Cohen, *Indexed Insurance Products: Are They Securities?*, INV. LAW., Feb. 2007, at 3, 3–4.

282 *See* Letter from Eugene Scalia & Daniel J. Davis, Gibson, Dunn & Crutcher LLP, to Florence Harmon, Acting Secretary, SEC (Nov. 17, 2008) (on file with author) (enclosing Comments of the Coalition for Indexed Products Regarding Proposed Rule 151A).

of federal securities laws, rather than "insurance."[283] Section 3(a)(8) of the Securities Act of 1933 explicitly exempts "insurance" from the securities laws and an SEC regulation, known as Rule 151, provides an additional "safe harbor" exception for insurance.[284] However, ever since the *SEC v. Variable Annuity Life Insurance Company of America* case in 1959, courts have held that variable annuities sold by life insurers constitute "securities" that are not covered by Section 3(a)(8)'s insurance exemption.[285] In the 1967 case *SEC v. United Benefit Life Insurance Company*, the Supreme Court expanded this definition to cover variable annuity policies that also contained some guaranteed component, holding that although the guarantee had an insurance aspect, it was conceptually severable from the variable portion of the policy.[286]

Fixed annuities that allow variable returns to the policyholder were first sold in 1995, but in contrast to traditional variable annuities, were initially considered to be "insurance" exempted under Section 3(a)(8) and/or the safe harbor of Rule 151. The SEC, after seeking comment on the issue in 1997, remained silent.[287] But in the *Malone v. Addison* case of 2002, a federal district court intervened in

283 Section 2(a)(1) of the Securities Act of 1933 defines a long list of assets as "securities," including those that are "investment contracts." Securities Act of 1933, 15 U.S.C. § 77b(a)(1) (2012); *see also* SEC v. W.J. Howey Co., 328 U.S. 293 (1946) (providing the controlling interpretation of that provision).

284 15 U.S.C. § 77(c)(a)(8) (2012). The Rule 151 safe harbor applies Section 3(a)(8)'s exemption to all products that: (1) are sold by insurance companies as annuities; (2) require that the "insurer assumes the investment risk under the contract"; and (3) are not marketed by insurers as investments. 17 C.F.R. § 230.151.

285 SEC v. Variable Annuity Life Ins. Co. of Am., 359 U.S. 65 (1959).

286 SEC v. United Benefit Life Ins. Co., 387 U.S. 202 (1967).

287 The SEC took no action in response to comments it received pursuant to its 1997 concept release, resulting in an implicit rule in which the SEC would evaluate these products on a case-by-case basis. *See* Gary O. Cohen, Fixed Indexed Insurance Products: Perspectives on Their Status as Insurance or Securities under the Federal Securities Laws 404 (Nov. 16, 2006), SM 039 ALI-ABA 381.

the grey area by holding that fixed-income annuities were not "securities."[288] The SEC eventually responded with a proposed Rule 151A in 2008, which narrowed the definition of Rule 151 to exclude any fixed annuity policies with amounts payable that are: (1) calculated retrospectively at the end of crediting period by reference to the performance of a security or index during that period; and (2) "more likely than not to exceed the amounts guaranteed under the contract."[289] After a notice-and-comment period, the SEC formally adopted Rule 151A, to take effect on January 2011. Its rulemaking was blessed that same year by the D.C. Circuit in *American Equity Investment Life Insurance Company v. SEC*, which applied *Chevron* deference in holding that, with Rule 151A, the SEC had not applied an unreasonable interpretation of the 1933 Securities Act.[290] Briefly thereafter, however, the D.C. Circuit reheard the case and reversed itself a year later, holding that the SEC's rulemaking was arbitrary and capricious.[291]

Putting aside the D.C. Circuit's curious pair of rulings in *American Equity*—and granting the economic similarities among index mutual funds, variable annuities, and fixed annuities—it is unclear that Rule 151A's attempted shift to a more functional definition of annuities sold by insurance companies is wise policy. In its rulemaking, the SEC argued that Rule 151A would improve the market for fixed annuities by providing better disclosure requirements, greater sales practice protections, increased regulatory certainty, and enhanced competition between annuities and mutual

288 *See* Malone v. Addison, 225 F. Supp. 2d 743, 754 (W.D. Ky. 2002) (considering both Section 3(a)(8) and the Rule 151 safe harbor in the alternative, and concluding that both provisions compelled the same result).

289 Indexed Annuities and Certain Other Insurance Contracts, 73 Fed. Reg. 37,752 (proposed July 1, 2008) (to be codified at 17 C.F.R. pts. 230, 240) [hereinafter SEC Proposed Rule].

290 17 C.F.R. § 230.151A(a); Am. Equity Inv. Life Ins. Co. v. SEC, 572 F.3d 923, 930–31 (D.C. Cir. 2009).

291 Am. Equity Inv. Life Ins. Co. v. SEC, 613 F.3d 166 (D.C. Cir. 2010).

funds.[292] However, the SEC's decision appears to reflect several of the disadvantages of aggressively pursuing functional regulatory boundaries. For one, there is a risk of redundancy in applying an additional layer of regulation to products already regulated under insurance laws, which have expansive disclosure and consumer protection rules that overlap substantially with requirements under the securities laws.[293] Such redundancy would appear to provide few benefits because there is not strong evidence that fixed indexed annuities markets are particularly prone to abusive sales practices.[294] At the same time, by the SEC's own admission, Rule 151A will impose large compliance costs on insurers selling fixed annuities.[295] Moreover, contrary to the SEC's assertion, because fixed indexed annuities are commonly sold by individual agents—who at least in some number will be driven out of business due to the new compliance costs—Rule 151A will reduce, not enhance, competition.[296] In addition, there does not appear to be a significant decrease in definitional indeterminacy under the new rule, which will cover policies based on a speculative assessment of the proportion of future market returns that are "more likely than not" to exceed guaranteed minimums.[297] Finally, some argue that the SEC's ever-expanding reach into annuities markets is leaving the agency overburdened and extending its jurisdiction past the limits of its core competency and expertise.[298] Thus, the

292 *See* SEC Proposed Rule, *supra* note 289, at 37,768–69.

293 *See* Scalia & Davis, *supra* note 282; Van Heuvelen, *supra* note 280, at 683–87.

294 *See* Van Heuvelen, *supra* note 280, at 683–87.

295 *See* Indexed Annuities and Certain Other Insurance Contracts, 74 Fed. Reg. 3138, 3168 (Jan. 16, 2009) (to be codified at 17 C.F.R. pts. 230, 240) (citing an estimate that compliance may cost insurers up to $800 million).

296 *See* Van Heuvelen, *supra* note 280, at 687–88.

297 *See supra* note 289 and accompanying text (quoting the text of Rule 151A).

298 *See* Cohen, *supra* note 281, at 4 (hypothesizing with regard to annuities that the SEC has "bit off more than it could chew").

previous definitional boundary drawn between fixed-indexed and variable annuities sold by life insurers illustrates the subtle advantages of retaining some degree of formal regulatory definitions, even in the face of clear functional convergence.

b. Credit Default Swaps

At first glance, CDS appear to be functionally equivalent to policies known as bond insurance, and both products were commonly sold by monoline insurers specializing in financial guarantees.[299] With bond insurance, an insurer commits to cover the loss incurred by the insured bondholder in the event the bond defaults, in exchange for a stream of premiums from the insured.[300] In a CDS contract, a CDS-seller provides protection to a CDS-buyer in the form of a one-time payout upon the occurrence of a negative "credit event" affecting a reference security.[301] In exchange, the buyer provides a stream of payments to the seller.[302] Thus, CDS share a basic economic logic with other financial guarantee "insurance policies": both instruments essentially function as out-of-the-money put options on the value of an underlying asset, in which the seller agrees to bear the potential downside in the asset's value in exchange for a stream of premium payments from the buyer.[303] In addition,

299 *See* Robert Schwartz, *Risk Distribution in the Capital Markets: Credit Default Swaps, Insurance and a Theory of Demarcation*, 12 FORDHAM J. CORP. & FIN. L. 167, 181 (2007); David Z. Nirenberg & Richard J. Hoffman, *Are Credit Default Swaps Insurance?*, 3 DERIVATIVES REP. 7 (2001).

300 *See* Schich, *supra* note 61, at 82.

301 *See* Arvind Rajan, *A Primer on Credit Default Swaps*, *in* THE STRUCTURED CREDIT HANDBOOK 17 (Arvind Rajan et al. eds., 2007).

302 The amount of protection is typically measured by the full market value of the reference security, referred to as the "notional amount" of the CDS contract. *See id.*, at 23. The stream of payments owed by the buyer is often referred to as the CDS "spread" and is expressed in basis points on the notional amount of the CDS, to be paid quarterly or semi-annually for the term of the CDS. *Id.* at 3, 23.

303 *See* ACHARYA ET AL., *supra* note 5, at 257.

both CDS and bond insurance were often used interchangeably by issuers of RMBS and CDOs as "credit enhancements" that would provide an AAA or otherwise improved rating for the securities that they sold to investors.[304]

Despite these similarities, CDS differ from bond insurance in a number of ways. First, consistent with the insurance principle of indemnification, bond insurance requires that the insured security experience an actual default and provides the insured with coverage equal to the loss experienced due to non-performance. In contrast, CDS contracts often define protection-triggering "credit events" affecting a reference security more broadly to include adverse developments, such as a ratings downgrade, that do not cause the holder of the reference security to suffer an actual loss.[305] The two instruments also differ in that, unlike bond insurance, CDS contracts often allow for "physical" rather than cash settlement if protection is triggered by a credit event.[306] The final and most significant distinction between the two instruments is that CDS may run afoul of the "insurable interest" doctrine, because a protection-buyer does not need to actually own the reference security that the CDS is protecting. A CDS is "covered," and functions as a hedge, if the CDS buyer owns the reference security that is protected by the CDS; but a CDS is "naked" if it allows a buyer to speculate on the incidence of a credit event affecting reference securities held by third parties.[307] In comparison, the insurable interest doctrine prohibits, among other

304 *See* Schich, *supra* note 61, at 84; Kimball-Stanley, *supra* note 23, at 244.

305 A ratings downgrade on a reference security only reflects an increased probability of future default. *See* Schwartz, *supra* note 299, at 193–94.

306 In other words, a seller may obtain and physically deliver to the buyer a new security that is equivalent to the reference security in lieu of a cash payment. *See* Nirenberg & Hoffman, *supra* note 299, at 14.

307 *See* Henderson, *supra* note 23, at 17–19; Schwarz, *supra* note 299, at 190–91.

things, the purchase of a life insurance policy that is contingent on the death of a third party.

Prior to 2008, the functional overlap described above did not dictate regulatory definitions: financial guarantees in the form of bond insurance were considered "insurance" and were regulated pursuant to state laws for monoline insurers, while CDS were treated as "swaps" subject to federal regulation and industry protocols promulgated by the ISDA. Although the NAIC and ISDA skirmished over whether or not CDS should be considered insurance,[308] the decision was largely made by the state of New York and its Insurance Department.[309] Beginning in 1997, and pursuant to a series of guidance documents that were eventually codified in 2004, the NYID allowed financial guarantors operating in-state to set up affiliated special purpose vehicles to write CDS unencumbered from the Insurance Department's oversight.[310]

At the federal level, CDS' technical status as swaps placed them nominally under the purview of the CFTC, but because they were defined as transactions involving "excluded commodities" under the Commodity Futures Modernization Act of 2000 ("CFMA"), they were exempted from the jurisdiction of the CFTC, or any other federal

308 *Compare* NAT'L ASS'N OF INS. COMM'RS, DEFINITION OF INSURANCE WORKING GROUP WHITE PAPER 2–4 (2000), http://www.naic.org/store/free/DOI-OP.pdf [http://perma.cc/XDL4-EL2L] (defining insurance so as to include CDS), *with* INT'L SWAPS & DERIVATIVES ASS'N, 2003 ISDA CREDIT DERIVATIVES DEFINITIONS, Art. IV (2003), https://globalmarkets.bnpparibas.com/gm/features/docs/dfdisclosures/2003_ISDA_Credit_Derivatives_Definitions.pdf [https://perma.cc/8DL2-MTLV] (defining credit events such that CDS would be swaps, not insurance).

309 All six of the major bond insurers were either domiciled in New York or otherwise licensed to sell insurance under New York insurance laws. N.Y. INS. LAW § 6901(a), (j-1) (McKinney 2014).

310 *See Office of the General Counsel Opinion on Weather Financial Instruments*, N.Y. DEP'T OF FIN. SERV. (Feb. 15, 2000), http://www.dfs.ny.gov/insurance/ogco2000/rg000205.htm [https://perma.cc/5VU6-9NBY]; N.Y. INS. LAW § 6901(j-1) (McKinney 2014); 2004 N.Y. Sess. Laws Ch. 605 (S. 6679-A).

regulator, and were not cleared on any regulated exchange.[311] Instead, CDS were traded over-the-counter subject to the ISDA's close-out and netting rules.[312] The practical result of the formalistic regulatory definitions that distinguished CDS from bond insurance was that—in addition to lacking the disclosure, standardization, or licensing requirements applicable to bond insurance—CDS were subject to different bankruptcy, accounting, and tax treatments as well.[313]

After the 2008 Crisis, tentative steps were taken to regulate CDS as insurance. In particular, the NYID issued a guidance suggesting that it intended to regulate the sale of covered CDS as insurance and, along with the NAIC, New Jersey, Missouri, and South Carolina rattled their sabers as well.[314] This did not come to pass, however, mainly because Dodd-Frank stepped into the void to provide a new regulatory framework governing CDS of all types. Title VII of Dodd-Frank essentially reverses the decision made by the CFMA to define CDS as "excluded commodities" beyond the jurisdiction of the CFTC, and grants the agency authority to regulate swap dealers and the majority of CDS as "non-security-based swaps." [315] In doing so, Dodd-Frank mandates that the CFTC engage in a sweeping set of forty-three rulemakings, relating to the development of centralized clearing of CDS, reporting on CDS transactions, collateral

311 CFMA, Pub. L. No. 106-554, 114 Stat. 2763 (2000) (codified as amended in scattered sections of 7 U.S.C. (2012)).

312 *See* Christopher L. Culp, *OTC-Cleared Derivatives*, 2 J. APPLIED FIN. 103, 107–08 (2010).

313 *See* Andrea S. Kramer et al., *The New York State Insurance Department and Credit Default Swaps: Good Intentions, Bad Idea*, J. TAX'N & REG. FIN. INSTITUTIONS, Jan. 2009, at 22, 31–33.

314 *See* N.Y. DEP'T OF FIN. SERV., CIRCULAR LTR. NO. 19 (2008); Kramer et al*., supra* note 313, at 34, nn.88–89.

315 Dodd-Frank splits jurisdiction over CDS between the CFTC and SEC, and makes the SEC responsible for "securities-based swaps." Dodd-Frank §§ 721, 723, 761, 7 U.S.C. §§ 1a, 2, 15 U.S.C. § 78c(a) (2012).

requirements for CDS trades, and registration of "major" swap dealers and purchasers.[316]

It is apparent that naked CDS serve a complex variety of functions, most of which are essentially unrelated to insurance, including bond insurance.[317] However, despite some technical differences, a strong functional analogy can be made between bond insurance and covered CDS, which constitute roughly one-fifth of the CDS market.[318] Both instruments allow the buyer to obtain credit enhancements on their underlying security while making the seller responsible for the risk that the security suffers some deterioration in quality. Furthermore, the distinction between a credit "default" that triggers bond insurance coverage and a "credit event" triggering CDS protection is not profound. In retrospect, then, maintaining the formal regulatory distinction between the two products prior to 2008 is hard to defend. The palpably laxer regulations for covered CDS compared to bond insurance caused monoline insurers to rush into CDS markets as soon as the NYID provided clearance to do so, with results that were uniformly disastrous.[319]

316 *See* Gabriel D. Rosenberg & Jai R. Massari, *Regulation through Substitution as Policy Tool: Swap Futurization under Dodd-Frank*, COLUM. BUS. L. REV. 667, 676–93 (2013).

317 *See, e.g.*, Michael S. Gibson, *Understanding the Risk of Synthetic CDOs* (Bd. of Governors of the Fed. Reserve Sys., Finance and Economics Discussion Series, Working Paper No. 2004-36, 2004), http://www.federalreserve.gov/pubs/feds/2004/200436/200436abs.html [http://perma.cc/8ZJ4-4MEL].

318 Rene M. Stulz, *Credit Default Swaps and the Credit Crisis* 5 (Nat'l Bureau of Econ. Research, Working Paper No. 15348, 2009); MORRISON & FOERSTER LLP, CREDIT DEFAULT SWAPS AS INSURANCE: ONE REGULATOR OR MANY?, 2 (Oct. 6, 2008), http://www.mofo.com/~/media/Files/Resources/Publications/2008/10/Credit%20Default%20Swaps%20as%20Insurance%20One%20Regulator%20__/Files/081006CreditDefault/FileAttachment/081006CreditDefault.pdf [http://perma.cc/B42J-ZG9K] ("It is estimated that this will result in New York regulating approximately one fifth of the huge $62 trillion market.").

319 *See* Neale & Drake, *supra* note 61, at 10–15.

After Dodd-Frank, the question becomes a closer one because the disparate regulatory treatment between bond insurance and covered CDS will narrow.[320] As with financial guarantors, CDS dealers will eventually be subject to some form of parallel requirements relating to disclosures, collateral and margin requirements, capital and liquidity rules, and contract standardization. One problem with the NYID, or any other state insurance supervisor, stepping in to regulate covered CDS on functional grounds is that doing so would simply introduce a new set of very formal regulatory boundaries: (1) covered CDS would be subject to substantially different regulatory treatment than naked CDS, despite sharing many features in common; (2) covered CDS sold by insurers would be regulated as insurance, while the same product sold by a bank or hedge fund may not be, depending on the state insurance supervisors' jurisdiction; and (3) if states besides New York decide to enter the fray, the NAIC may not be effective at harmonizing the regulation of covered CDS, leading to different treatment of covered CDS sold by insurers in different states.[321]

The NYID's tentative announcement in 2009 that it may intervene in CDS regulation is therefore sensible when viewed as a threat to prod federal regulators to close the regulatory gap, rather than a firm promise to enter the field.[322] Although much depends on the vagaries of the rulemaking process at the CFTC, it is likely to have a comparative advantage in regulating swaps relative to state insurance regulators, even for swaps that primarily perform an insurance function. One reason is that the agency will be overseeing the market infrastructure for related instruments, such as interest rate and foreign exchange swaps. In doing so, it will develop expertise concerning the

320 *See* Steven A. Sibo, Credit Default Swaps: How Should They Be Regulated?, 33–34 (July 4, 2012) (unpublished manuscript) (on file with author), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2099886 [http://perma.cc/8VZD-S5NU].

321 *See* Kramer et al., *supra* note 313, at 33–34.

322 *See id.*

extent which these previously over-the-counter ("OTC") contracts may be moved to exchanges, as well as technologies for aggregating data on swaps that remain OTC. This reflects a general advantage of formalism mentioned above, namely that "stationary" regulators are better able to specialize and accumulate expertise relative to "roving" regulators that move across markets to keep up with functional changes brought by financial innovation.

2. Functional Regulation of Institutions

Definitional boundaries can be drawn, in a formal or functional manner, to differentiate the regulatory treatment of not just products but also financial institutions as a whole. The 2008 Crisis revealed that the economic function of insurance companies have in substantial part converged with that of other financial intermediaries and has therefore prompted consideration of a more functional regulation of insurance companies, specifically in connection with their relationship to systemic risk. As discussed below, Dodd-Frank provides regulators with discretion to ignore formal definitional boundaries that require a unique treatment of insurance firms compared to other financial intermediaries. At the same time, it may indirectly create new regulatory distinctions, namely with respect to solvency rules for large versus small insurers.

a. Solvency Rules for Systemically-Important Insurers

Section 113 of Dodd-Frank grants the Federal Reserve, through the FSOC, the power to identify "designated non-banking financial institutions" and subject them to the same heightened regulation as systemically important banks—an exercise that denies formal distinctions on its face.[323] Dodd-Frank Section 113 is also less formalistic than a definitional distinction made in GLB, which limited the Federal

323 Dodd-Frank § 113, 12 U.S.C. § 5323 (2012).

Reserve's oversight of large financial conglomerates to only those institutions that chose to be structured as FHCs.[324] The Dodd-Frank rule carves out a more functional regulatory category, because whether an institution is structured in the form of a FHC is a legal technicality that does not itself determine the extent to which it contributes to systemic risk.

In principle, Dodd-Frank's minimal requirement that the Federal Reserve engage in oversight of all systemic financial institutions, regardless of whether they are technically categorized as banks or FHCs, is a generally sensible step towards greater functionalism. As this Article has argued, the degree to which insurance companies have become entangled with the stability of the entire financial sector was not appreciated during the 2008 Crisis. And outside of the example of AIG, it remains widely overlooked.[325] Monitoring systemic institutions without restricting the process based on an institution's formal legal structure, as an insurer or otherwise, closes that glaring regulatory gap. Besides the number of large insurers that are so-designated,[326] the practical importance of Dodd-Frank Section 113 will turn on how the Federal Reserve exercises the vast discretion it has been afforded for supervision of systemic institutions.

One opportunity for a bold step towards functionalism is set in motion by the intersection of Dodd-Frank Section 113 with Section 171, the so-called Collins Amendment. This provision is commonly interpreted to grant the Federal Reserve authority to not only monitor systemic insurers more closely, but also to make the latest round of quantitative capital requirements developed for banks, including Basel III, also apply to systemically-important non-bank institutions such as insurers.[327]

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324 *See supra* note 131 and accompanying text.

325 *See supra* Part II.A.

326 The list currently includes AIG, Prudential Insurance, and MetLife. *See supra* note 150.

327 Dodd-Frank § 171, 12 U.S.C. § 5371 (2012); *see also* Dodd-Frank § 165, 12 U.S.C § 5365 (2012) (requiring new capital requirements for banks); *see generally* Margaret E. Tahyar, *Collins Amendments Sets*

Although expanding the scope of the FSOC's supervisory authority appears sound, using the Collins Amendment to require identical solvency rules across systemic institutions pushes the functional analogy between banks and insurers too far. Despite the fact that there has been growing convergence between the two industries, the overlap is not complete and includes at least two critical differences. First, liquidity requirements are crucial for banks because their general model is to turn short-term, liquid liabilities into long-term, less liquid assets; insurance firms have come to share this feature with banks to some degree, but maturity and liquidity transformation are not the essence of their business model.[328] As a consequence, the centrality of heightened liquidity requirements in Basel III and related solvency rules is appropriate for banks and possibly other payments vehicles such as money market mutual funds, but fits awkwardly with insurers' varied mix of business.[329] Second, in issuing traditional policies, insurers' liabilities continue to carry non-financial underwriting risks—relating to the incidence of extreme weather events and demographic variables such as mortality rates—that do not apply to banks and rightly go wholly unaccounted for in their capital rules.[330] In light of these and related concerns, European regulators rightly chose to develop the Solvency II framework, which generally follows the "three-pillar" structure of Basel III, but contains substantive requirements

Minimum Capital Requirements, HARVARD LAW SCHOOL FORUM ON CORP. GOVERNANCE & FIN. REGULATION (July 8, 2010), http://corpgov.law.harvard.edu/2010/07/08/collins-amendment-sets-minimum-capital-requirements/ [http://perma.cc/73RH-7KWJ]. The Collins Amendment itself was recently amended, but in a limited manner which emphasizes that regulators at the Fed are not *required* to apply bank rules to insurers, yet retain discretion to do so. *See* Insurance Capital Standards Clarification Act of 2014, Pub. L. 113-279, § 2, 128 Stat. 3017, 3017–18 (2014).

328 *See supra* Part II.A.

329 *See* IAIS, FINANCIAL STABILITY, *supra* note 36, at 6–12.

330 *See id.*

that are tailored to the business of insurance.[331] Unsurprisingly, the insurance industry has been alarmed at the prospect of being subject to an identical set of solvency rules as banks, and has begun to lobby for proposed legislation that would write such discretion out of the Collins Amendment.[332] For the reasons stated above, these positions are justified and it would be fair to characterize the Collins Amendment, as originally drafted to graft capital requirements for large banks onto large insurers, as a case of functional overreach.

b. Solvency Rules for All Insurers

If Dodd-Frank Section 113 or the Collins Amendment erases the formal boundary between large banks and systemically-important insurance companies, it thereby will effectively draw another definitional boundary dividing treatment of the systemic insurers from that of non-systemic insurers. Importantly, this new definitional boundary will give rise to the regulatory "race" dilemma that generally underlies an aggressively functional approach. To the extent that Dodd-Frank makes oversight dramatically more stringent for the largest insurance companies, it will cause risk taking by non-systemic insurers to become relatively more profitable. Such a dynamic could pose a substantial threat to financial stability, because there is no logical reason or historical evidence to suggest that a fragile swath of small or medium-sized firms cannot collectively destabilize the financial system. The 2008 Crisis itself demonstrated this possibility, with the disruption caused by the near-

331 *See* Smith, *supra* note 186; Jon Danielsson et al., *Solvency II: Three Principles to Respect*, VOX: CEPR'S POLICY PORTAL (Oct. 21, 2013), http://www.voxeu.org/article/solvency-ii-three-principles-respect [http://perma.cc/PS6K-6C7F].

332 *See* H.R. 2140, 113th Cong. (1st Sess. 2013); S. 1369, 113th Cong. (1st Sess. 2013); *see also* Michael R. Crittenden, *Lawmakers Move to Protect Insurers*, WALL. ST. J.: MONEYBEAT (July 25, 2013, 6:13 PM), http://blogs.wsj.com/moneybeat/2013/07/25/lawmakers-move-to-protect-insurers/ [http://perma.cc/8DRF-5K84].

simultaneous downgrade of several monoline insurance firms.[333]

Modernizing solvency regulation for only a small number of large, interconnected insurance companies would also exacerbate pressure on a preexisting regulatory boundary that subjects all insurance companies to a unique and somewhat anachronistic set of solvency rules that are not applied to banks, securities firms, or other financial intermediaries. As argued above, the funding model and asset mix typical to insurance firms cautions against imposing *identical* solvency rules for both insurers and banks. However, the argument for functional reform becomes stronger in the narrow case where the same risks are measured differently by regulators when they are borne by different types of institutions. Here, insurance regulation lags behind rules applied to banks and other financial firms in at least in two areas: accounting standards and the role of credit ratings.

Accounting rules are an essential part of solvency regulation, because managing risk is a function of how it is measured and "the purpose of financial accounting is to provide information about a firm's performance and prospects not just to investors but also to regulators."[334] In the United States, insurers are governed by accounting rules known as Statutory Accounting Principles ("SAP") that are not used for other financial firms, nor for insurers in foreign jurisdictions.[335] SAP-based regulations are traditionally defended on the grounds that they are especially suited for insurance and can produce relatively conservative results

333 Other examples are the massive contemporaneous failure of small lenders that characterized both the Great Depression and the 1980s savings and loan crisis.

334 ACHARYA ET AL., *supra* note 5, at 269.

335 *Id.* at 273–74; *see also Statutory Accounting Principles (SAP)*, NAT'L ASS'N INS. COMM'RS (last updated Sept. 24, 2015), http://www.naic.org/cipr_topics/topic_statutory_accounting_principles.htm [http://perma.cc/KE4K-UB3B] (noting that the NAIC Accounting Practices and Procedures Manual applies to most insurers).

compared to Generally Accepted Accounting Principles ("GAAP") rules. But, many of the features of SAP that make insurance accounting unique have been rendered anachronistic by the convergence of the insurance industry with the banking and securities sectors.

There are a number of ways in which insurers' SAP could be modified to conform to accounting standards for other financial institutions so that assets bearing similar risks are measured similarly across industries. Perhaps the most straightforward adjustment that is needed is to modify SAP rules that presently omit the time value of money from valuations of insurance assets, which are of multi-year duration and should be discounted accordingly just as all other financial assets are.[336] An additional issue is that under current SAP rules there is a crazy quilt of classifications across types of insurance policies, which apply substantially different accounting measures for policies that are often quite similar in economic function. One example is accounting for financial guarantees, which include insurance on mortgage-backed securities. Depending on the details of a particular bond insurance policy, SAP standards will categorize variously as an "insurance policy," a "derivative," or a "loss contingency."[337] Lastly, reporting requirements for insurance firms could be made more robust by requiring disclosure of risk assumptions concerning concentrated holdings of financial guarantees and other non-traditional policies, such as annuities with high minimum guarantees. This would allow regulators to be more aware of the large-scale bets on macroeconomic variables that these positions represent.

To be sure, the details of these reforms are critical, and the Financial Accounting Standards Board and International Accounting Standards Board are involved in ongoing efforts to update accounting standards for insurers in a number of the above-mentioned areas. The appropriate guiding

336 ACHARYA ET AL., *supra* note 5, at 273–74.

337 *Id.*

principle, however, is that—to the extent that the assets-and-liabilities of insurance companies are functionally similar to those of banks and other financial firms—they should not be subject to radically different rules under SAP. Otherwise, regulatory supervisors who must evaluate the risks taken by insurance companies that are tightly interconnected with other portions of the financial system will be forced to interpret a needlessly inconsistent and opaque body of insurance disclosures.

A final definitional boundary, which has been indirectly drawn by Dodd-Frank between insurers and other financial institutions, concerns the role of third-party credit ratings. Prior to 2008, financial regulations gave three rating agencies—Moody's, Fitch, and Standard & Poor's—the privileged designation of Nationally Recognized Statistical Rating Organizations ("NRSROs"). Ratings provided by the NRSROs were then widely used as a basis for determining the riskiness of banks' and certain securities firms' assets for purposes of capital requirements, as well as restricting the kinds of investments that they could make.[338] Solvency regulations for insurers, as devised by the NAIC and implemented through its Securities Valuation Office ("SVO"), also relied heavily on the rating agencies, a practice that accelerated in the decade leading up to the 2008 Crisis.[339] Although the SVO at one point retained a general (if rarely used) discretion to depart from rating agency assessments, the NAIC designated investment-grade corporate and municipal bonds as exempt from its review in 2000.[340] And, beginning in 2004, the SVO allowed insurers to opt in to the NRSROs' ratings across their entire balance sheets, with the vast majority choosing to do so.[341]

338 Lawrence J. White, *Markets: The Credit Rating Agencies*, 24 J. ECON. PERSP. 211, 212–14 (2010).

339 *See* Hunt, *supra* note 26, at 1675.

340 *Id.*

341 NAT'L ASS'N INS. COMM'RS, MEMORANDUM: UNDERSTANDING THE NAIC FILING EXEMPTION (FE) RULE 1 (2004), http://www.naic.org/

During the 2008 Crisis, the rating agencies' assessments fell into disrepute when corporate and securitized bonds given presumptively low-risk AAA and AA ratings experienced widespread losses.[342] In response, Dodd-Frank entirely removed NRSRO ratings as inputs for a variety of regulatory requirements.[343] An NAIC working group formed in 2009 initially entertained the idea of eliminating reliance on the credit rating agencies for its risk-based capital rules for insurers as well, and possibly replacing them in-house with ratings developed by the SVO. But this proposal lost momentum by the time the NAIC issued its final report in 2010.[344] As a result, post-2008 solvency regulation for insurance companies retains a significant role for the credit ratings agencies despite the fact that their use in regulatory requirements for other financial firms has been substantially abandoned under Dodd-Frank.

The fundamental problem with credit ratings was not that they proved to be inaccurate measurements of risk (many people failed to predict the magnitude of the 2008 Crisis), but that financial firms could rely on ratings to satisfy regulatory requirements *whether or not* risk managers at those firms believed the ratings were accurate. The regulatory imprimatur given to ratings, in effect, "encouraged the rating agencies to shift from the business of providing valuable credit information to the far more lucrative business of selling regulatory licenses."[345] In the process, the quality of information that the ratings agencies provided was degraded. Dodd-Frank's excision of credit ratings from solvency requirements for banks and certain

documents/svo_FE_FAQ.pdf [http://perma.cc/BS79-QL7Y]; *see also* Hunt, *supra* note 26, at 1675.

342 *See* White, *supra* note 338, at 220–21; FIN. CRISIS INQUIRY COMM'N, THE FINANCIAL CRISIS INQUIRY REPORT xxv (2011).

343 Dodd-Frank § 939A, 15 U.S.C. § 78o-7 (2012).

344 *See* Hunt, *supra* note 26, at 1683 nn.66–67.

345 Frank Partnoy, *The Siskel and Ebert of Financial Markets? Two Thumbs Down for the Credit Rating Agencies*, 77 WASH. U. L.J. 619, 623 (1999).

securities firms therefore removes a regulatory dysfunction and is a reform that makes good sense. The failure to apply the same ratings reforms to insurance companies creates a formalistic definitional boundary that is counterproductive. Firms that are categorized as insurers serve no special economic function that would justify a unique treatment that retains credit ratings in their prior role. Nor are the advantages of a formalistic approach present in this context.

Moreover, such a distinction is not only bad policy with respect to insurance, but also threatens to undermine Dodd-Frank's reform and reintroduce the pathologies of the old system.[346] This is a consequence of insurance's convergence with the rest of the financial system. As noted earlier, insurance companies are some of the largest purchasers of corporate, municipal, and structured bonds.[347] Insurance companies will demand inflated ratings for these assets if that enables them to more easily meet regulatory requirements. This in turn will decrease the accuracy of the ratings and reduce an otherwise valuable source of information to financial markets as a whole. The role of credit ratings in insurance regulation repeats the problem of excessive formalism that is raised in the context of SAP accounting standards, in that the riskiness of identical assets will be measured differently by regulators depending on whether they are held by an insurer or a bank.

In summary, this Part identifies the policy tradeoffs involved when considering formal versus functional definitional boundaries. It then explains how economic changes in insurance interact with the current regulatory environment in a number of areas to raise the question of whether definitional boundaries that demarcate "insurance" should be less formalistic. Contrary to a tendency in the literature to advocate for more "functional regulation" in response to financial innovation, this analysis makes the

346 *See* Hunt, *supra* note 26, at 1686.

347 *See supra* Part II.A.

case for finding a middle ground that retains a substantial amount of formalism in regulatory definitions.

V. REGULATORY ARBITRAGE AND COST-BENEFIT ANALYSIS PROCEDURES

The jurisdictional and definitional boundary problems presented above raise distinct sets of policy considerations, but common to both is the underlying issue of regulatory arbitrage. "Regulatory arbitrage" is a term that adapts the finance concept of arbitrage[348] to describe the practice of repackaging an activity so that it is subject to a more favorable regulatory treatment, while keeping the economic substance of the activity unchanged.[349] Regulatory arbitrage can be achieved by superficially re-characterizing a financial service so that it crosses from one side of a definitional boundary to the other, less regulated side. It can also be accomplished by moving financial activity outside of one jurisdictional boundary to another, more loosely regulated jurisdiction. The potential for regulatory arbitrage means that the drawing and policing of the two boundaries raises a general problem: to the extent that regulation within a given boundary is effective at internalizing market externalities, it raises the cost of legal compliance and increases the incentive to shift activities across the regulatory boundary to a less regulated sector.[350]

The two boundary problems presented in this Article, along with the accompanying issue of regulatory arbitrage, apply to financial services provided by banks and securities firms no less than they do to insurance. "Shadow banking" is the colorful term that is used to refer to financial activity that has slipped outside of the formal banking sector by

348 "Arbitrage" refers to cases where an investor earns risk-free profits by simultaneously buying and selling the same asset across two markets that price the asset differently due to various frictions or inefficiencies. *See* Shleifer & Vishny, *supra* note 90, at 35.

349 Fleischer, *supra* note 27, at 229.

350 Goodhart, *supra* note 12, at 48.

crossing a definitional boundary.[351] A formative moment in shadow banking dates back to the 1980s, when Regulation Q's ceiling on the interest rate that commercial banks could offer depositors caused deposits to flow to money-market mutual funds ("MMFs").[352] MMFs provide a payments service that is economically similar to that of banks, but they were not subject to Regulation Q because investments in MMFs were not defined as bank "deposits." Since the early 1980s, the MMF industry has remained immune from banking regulation and grown to manage over $3.5 trillion in assets. It was also at the heart of the 2008 Crisis when the prominent MMF Reserve Primary Fund "broke the buck" the Monday following Lehman Brothers' collapse on September 15, 2008.[353] Today, shadow banking consists of more than just MMFs, and has come to include entities that transact in repurchase contracts (repo lending), asset-backed commercial paper, and securitized assets such as RMBS and CDOs.[354] In the run-up to the 2008 Crisis, Tim Geithner, then at the Federal Reserve Bank of New York, estimated "that in early 2007 the assets held by all institutions in the entire banking system, including holding companies, was 'about $10 trillion,' while assets in the shadow banking system were 'about $10.5 trillion.'"[355] Post-2008, shadow banking has even come to include certain insurance companies, in light of the fact that "investment insurance groups are acting, and will increasingly act, as shadow banks, since they replace traditional banks as lenders."[356]

Compared to shadow banking, the recent phenomenon of "shadow insurance" is less well known. But it is an apt example of regulatory arbitrage that is executed by financial

351 *See* Macey, *supra* note 28, at 593–94; *see generally* POSZAR ET AL., *supra* note 28.

352 *See* ANAT ADMATI & MARTIN HELLWIG, THE BANKER'S NEW CLOTHES: WHAT'S WRONG WITH BANKING AND WHAT TO DO ABOUT IT 53–54 (2012).

353 *See* Mishkin, *supra* note 107, at 4–7.

354 *See* POZSAR ET AL., *supra* note 28.

355 Macey, *supra* note 28, at 594.

356 Veredas et al., *supra* note 71, at 2.

services moving across jurisdictional boundaries.[357] Shadow insurance involves the use of "captive" reinsurance subsidiaries that only reinsure policies of a parent insurance company, thus effectively transferring zero risk.[358] Captive reinsurers are chartered in offshore financial centers such as the Cayman Islands, as well as a few states, most commonly South Carolina and Vermont.[359] These jurisdictions apply lax capital requirements to reinsurance subsidiaries and thereby allow the parent company to evade more stringent requirements in their home state.[360]

Shadow insurance has experienced a rapid rise. The amount of liabilities ceded by life insurers to reinsurance captives increased from $11 billion in 2002 to $364 billion in 2012.[361] Insurance companies that use reinsurance captives constitute fifty percent of the market and, in 2012, ceded 25 cents on every dollar insured to shadow reinsurance subsidiaries.[362] The upshot of these figures is that the rise of shadow insurance—which is estimated to have reduced risk-weighted capital for life insurers by roughly half, or three ratings notches[363]—has substantially undermined capital requirements for life insurers in every state except for the handful of jurisdictions that encourage the chartering of captive reinsurance entities. The fact that this process has unfolded within the space of a decade highlights the impressive agility of financial activity to navigate jurisdictional boundaries in search of a preferred regulatory treatment.

357 *See* KOIJEN & YOGO, *supra* note 29, at 2–4; N.Y. STATE DEP'T FIN. SERVS., *supra* note 29.

358 *See* FIO MODERNIZATION REPORT, *supra* note 10, at 32–33; NAT'L ASS'N INS. COMM'RS, WHITE PAPER: CAPTIVES AND SPECIAL PURPOSE VEHICLES 20, 22–23, 30 (2013), http://www.naic.org/store/free/SPV-OP-13-ELS.pdf [http://perma.cc/AJ7Q-KP59].

359 N.Y. STATE DEP'T FIN. SERVS., supra note 29.

360 *Id*.; KOIJEN & YOGO, *supra* note 29.

361 KOIJEN & YOGO, *supra* note 29.

362 *Id.*

363 *Id.*

Adopting a working assumption that the scope for regulatory arbitrage is limited simplifies policy evaluation, but the shadow banking and insurance episodes indicate that in some cases it can be quite broad. In general, the manifold regulatory issues raised by the convergence of insurance that are detailed above demonstrate that the two boundary problems permeate finance, and can create surprising pathways for regulatory arbitrage. This carries implications for the emerging debate regarding the potential for mandating that a formal, quantitative CBA be applied to financial regulations.

The CBA proposal would apply to executive branch agencies concerned with finance and require that, as part of their rulemaking process, the agency explicitly quantify in dollar terms all the costs and benefits that it anticipates the proposed regulation will entail.[364] Under some versions of the proposal, courts would then exercise judicial review over the agencies to determine whether a CBA has been adequately performed.[365] Advocates frame the proposal as an extension of the practice of agencies that promulgate environmental and health and safety regulations, which have been subject to a formal CBA requirement that has enjoyed bipartisan support since the early 1980s.[366] Formal, quantitative CBA would be a departure from the status quo, often characterized as "conceptual CBA," where regulators are attentive to the perceived costs and benefits of a proposed rule but do not systemically reduce them to precise dollar values.[367]

364 *See* Posner & Weyl, *supra* note 30. As of now, the "independent" financial regulators, namely the SEC and Federal Reserve, do not face a CBA requirement. However, they have recently seen various pressures from each of the congressional, executive, and judicial branches to move in that direction. *See* Coates, *supra* note 30, at 882, 885–86.

365 *See* Coates, *supra* note 30, at 885–89.

366 Eric A. Posner & E. Glen Weyl, *The Case for Cost-Benefit Analysis of Financial Regulations*, REG., Winter 2013–2014, at 30, 33.

367 *See* Coates, *supra* note 30, at 887–88.

As an example of how the procedure would operate, proponents use a hypothetical new capital requirement rule for banks. In its rulemaking, an agency would be required to explicitly list the costs of the new capital requirements, in the form of literal paperwork compliance costs and, more importantly, the social cost of reducing liquidity and the flow of credit to the real economy.[368] It would then compare these costs to the benefits of the capital requirements, which would be quantified by the degree to which banks' decreased risk-taking reduces the "cost of a statistical [financial] crisis."[369] In the abstract, advocates for financial CBA support the idea with two appealing points. First, in our *Moneyball* era, in which the quantification-of-all-things is advancing a wide array of human endeavors, who can be against scientific rigor in weighing costs and benefits and instead favor an antiquated form of "intuitive balancing"? Second, since agencies formulating financial regulations inevitably must be considering their merits on some level, how can the process not be improved by making their implicit cost-benefit assumptions explicit?[370]

However, there are grounds for skepticism that the benefits of requiring CBA will be high relative to its costs. Granted, the greatest merit of experimenting with the idea is that the costs are not likely to be overwhelming, particularly in the absence of judicial review.[371] The Federal Register often includes comments by industry parties that are eager to quantify the allegedly inordinate costs that a proposed regulation will impose. And in any sizeable dispute, private

368 *See* Posner & Weyl, *supra* note 366, at 32–33.

369 Eric A. Posner & E. Glen Weyl, *Benefit-Cost Analysis for Financial Regulation*, 103 AM. ECON. REV. PAPERS & PROC. 393, 393 (2013).

370 Posner & Weyl, *supra* note 366, at 34.

371 Some critics argue that the CBA proposal will produce costly litigation. *See* John H. Cochrane, Cost-Benefit Analysis as a Framework for Financial Regulation (Feb. 2014) (unpublished manuscript) (on file with author), http://ssrn.com/abstract=2425885 [http://perma.cc/F5AY-7XF4]. But most regulation is already challenged in the courts. The deeper problem is that generalist federal judges are not trained to evaluate statistical CBA studies and the error-rate of their decisions might be high.

and government litigants customarily file expert reports that contain detailed econometric results in support of their positions.[372] The economic literature has also compiled a growing body of empirical research on the effects of capital requirements and other financial regulations. Thus, the agencies are not presently operating in a quantitative vacuum and data is readily available to generate *some* number to adapt to the strictures of CBA, if it is imposed.

On the other hand, against these modest costs, this Article's analysis of innovation in insurance markets casts doubt on whether the benefits of agency CBA would be substantial. Consider the capital requirements hypothetical. One insurance industry report suggests that higher capital requirements for banks will reduce their willingness to provide stand-by letters of credit for construction projects, which in turn will prove to be a boon to property and casualty insurers that underwrite surety bonds for the construction industry.[373] Will this dynamic be given an explicit numerical score in an agency's CBA of bank capital requirements, or instead be overlooked and implicitly weighted zero? If a number is chosen, how reliable would it be? Or, assume that Dodd-Frank's Collins Amendment is used to impose capital requirements designed for banks on systemically important insurers. Will the agencies include in their CBA a meaningful quantitative measurement of the effect that decision has on the mix of financial risk-taking that is borne by systemic insurers relative to the remainder of the insurance industry, which would now be subject to relatively less stringent solvency standards?

The basic underlying difficulty is that, in order to be useful, quantitative CBA requires financial agencies to move beyond a partial equilibrium analysis (how will capital requirements for banks affect the lending of those banks?) to estimate general equilibrium results (to what extent will imposing capital requirements on banks contribute to

372 *See* Posner & Weyl, *supra* note 366, at 34; Coates, *supra* note 30, at 890–94.

373 *See* AON, *supra* note 52.

reducing the "cost of a statistical financial crisis" that may appear anywhere in the financial system?). CBA is more tractable in environmental and safety regulation because, unlike finance, those areas of the economy are not as susceptible to the two regulatory boundary problems: financial assets are much more mobile across jurisdictional boundaries than are coal-fired power plants; financial transactions can be refashioned to elude regulatory categories more easily than can automobiles or building-insulation materials.[374] Professors Posner and Weyl refer to regulatory arbitrage as generating "second-order and third-order effects," which must be estimated with "coarse assumptions and rules of thumb."[375] But, given the magnitude of these effects in finance, as reflected by the rise of shadow banking and insurance sectors, resorting to rules of thumb means that in practice quantitative CBA will collapse into conceptual CBA.

Of course, environmental and safety regulations can be fraught with uncertainty as well, and face the additional challenge of being forced to monetize intangible goods such as the value of a life.[376] One method agencies use to cope

374 *Cf.* Jeffrey N. Gordon, *The Empty Call for Benefit-Cost Analysis in Financial Regulation*, 43 J. LEGAL STUD. S351, S365–66 (2014); Coates, *supra* note 30, at 1002–03 (referring to the "non-stationary" character of finance).

375 Eric A. Posner & E. Glen Weyl, *Cost-Benefit Analysis of Financial Regulations: A Response to Criticisms*, 124 YALE L.J.F. 246, 251 (2015), http://www.yalelawjournal.org/pdf/Posner-WeylPDF_ijby4z9e.pdf [http://perma.cc/6JE5-SVHD].

376 The frequent assertion that monetization of non-market goods such as human lives makes CBA for environmental regulation more "uncertain" than would be the case for financial regulation elides an important distinction. Regulators may in fact have reliable estimates regarding the relationship between the presence of a particular toxin and fatality rates; the further task of assigning a dollar-multiplier to the number of lives at risk involves stipulating to a philosophical position, and does not pose an intractable calculation problem. References to the usefulness of CBA in the antitrust context are also not quite on point. Antitrust CBA typically begins with an initial step of "defining the [relevant] market," and thereby reduces the problem to a partial

with this uncertainty is known as "break-even" analysis.[377] Assume OSHA proposes a rule to limit lead concentrations in paint; CBA requires that it project the implementation costs that will be incurred by employers and weigh them relative to the estimated reduction in the incidence of lead toxicity in workers. Break-even analysis requires that OSHA only propose the rule if the lowest point in the estimated range of benefits exceeds the high-point of the estimated range of costs. Break-even analysis mitigates against uncertain projections because, even if OSHA's estimates prove to be substantially inaccurate, they should nonetheless fall within the range between the lowest anticipated benefits and highest estimated costs so long as the estimates roughly tend in the right direction.

In the context of financial regulation, though, applying the liberal break-even criterion might still be insufficient. This can be shown by returning to the CBA hypothetical for capital requirements, as it would have been applied at the time of Basel II. Presumably, regulators would tally the costs that Basel II's restrictions on bank lending would have on the economy, estimate the crisis-prevention benefits of reduced risk-taking by banks, and then compare magnitudes. The problem is that according to a quite common assessment of the effects of Basel II,[378] an ex post CBA would find that the ex ante CBA was not only incorrect, but made a (+/-) sign-error for both prongs of the analysis. Basel II arguably pushed banks into AAA-rated mortgage-backed securities, which increased the flow of credit to the housing market, and contributed to the housing boom. In

equilibrium analysis. Because of the regulatory arbitrage features unique to finance that are emphasized in this Article, CBA for financial regulation can miss wide of the mark unless it accounts for much more elusive general equilibrium effects.

377 *See* Cass R. Sunstein, *Financial Regulation and Cost-Benefit Analysis*, 124 YALE L.J.F. 263, 270–75 (2015), http://www.yalelaw journal.org/forum/financial-regulation-and-cost-benefit-analysis [http://perma.cc/MK4D-KBRM].

378 *See* Romano, *supra* note 192, at 12–13; Whitehead, *supra* note 194, at 333–34; Atik, *supra* note 250, at 734–45.

other words, it increased (rather than decreased) lending to the real economy. At the same time, as was notoriously discovered in 2008, the AAA-rated securities that Basel II weighted as essentially risk-free turned out to be quite risky, and Basel II therefore had the effect of increasing (not decreasing) the amount of risk borne by the banking system and the statistical cost of a crisis. Such a result, of negative "benefits" and positive "costs," is foreign to CBA in environmental or transportation regulation, and cannot be saved by the restrictive assumption of break-even analysis.[379]

Ultimately, it is hard to argue against the propositions that benefits should exceed costs and that, *where practicable*, estimates should be quantified. But this does not mean that financial regulation would be materially improved by requiring federal agencies to perform the ritualized CBA currently practiced in environmental and health and safety regulation.[380] CBA proponents' argument that "CBA provides a useful device for combating regulatory arbitrage. Because CBA involves a predictable method and relies on data that are generally available, whether firms can more easily predict how agencies will react to new activities"[381] is also questionable. In general, when a particular measure

379 Although no quantitative CBA was in fact performed prior to Basel II, a result consistent to that described above was arrived at by the U.K.'s Financial Services Authority, when it performed one of the more sophisticated finance CBAs to date. In evaluating a proposed rule to reform mortgage lending, the FSA's report conceded that "the margin of error inherent in the estimation of the macroeconomic impacts means that in reality [the rule's] impact could either be positive or negative." Coates, *supra* note 30, at 951, 989–90; *cf. id.* at 951 (quoting the SEC's chief economist, who claimed in the context of a corporate governance CBA that "no sound structural model exists . . . to isolate the effect" of competing board-composition rules).

380 "Ritualized," because there is an open question over CBA's actual influence on agency practice. *See* Matthew D. Adler & Eric A. Posner, *Cost-Benefit Analysis: Legal, Economic, and Philosophical Perspectives*, 29 J. LEGAL STUD. 837, 841–42 (2000).

381 Posner & Weyl, *supra* note 366, at 34.

becomes a policy target, its prospective value as a measure is reduced, not increased.[382] An interesting illustration of this dynamic is the market for "364-day repo" contracts, which developed in response to Basel provisions that encouraged banks to hold assets with a maturity of less than one year as "liquidity enhancements."[383] And, as has been observed, regulators rightly keep the parameters of bank stress tests secret beforehand, so that banks cannot game the results.[384]

In sum, while extending quantified CBA to financial regulation may prove innocuous, there is a good case for being cautiously pessimistic about its potential for producing a more effective body of financial regulation. Because boundary problems generate large uncertainties in the estimates of financial CBA, quantitative CBA converges with the status quo of conceptual analysis when applied in practice.[385] The case of insurance underscores this point, by demonstrating that opportunities for regulatory arbitrage are surprisingly pervasive and difficult to anticipate in advance.

VI. CONCLUSION

This Article challenges the conventional wisdom that the role of insurance in the 2008 Crisis was limited to AIG. Instead, it shows that financial innovation on an industry-wide scale has led insurance companies to adopt economic

382 This rule of thumb was originated in the context of monetary policy, and is sometimes referred to as "Goodhart's Law." *See* Charles Goodhart, *Problems of Monetary Management: The U.K. Experience*, *in* INFLATION, DEPRESSION AND ECONOMIC POLICY IN THE WEST 111, 116 (Anthony S. Courakis ed., 1981).

383 *See* Viral V. Acharya, *The Dodd-Frank Act and Basel III* 18 (Int'l Growth Ctr., Working Paper No. 18, 2011), http://www.theigc.org/wp-content/uploads/2014/09/Acharya-2011-Working-Paper.pdf [http://perma.cc/X3UM-69PX].

384 Gordon, *supra* note 374, at 17 (stating that "the stress scenarios are not spelled out in advance to avoid giving the firm a specific benchmark to manage towards").

385 Posner & Weyl, *supra* note 375, at 258 ("When CBA is based on uncertain calculations, conceptual CBA and ordinary CBA do not differ.").

functions that are similar to those of banking or securities firms, and thereby converge with the broader financial sector. It then examines the policy issues raised by this convergence trend from the perspective of the two boundary problems that are generally applicable to all financial regulation. Definitional regulatory boundaries seek to categorize certain financial products as "insurance" and regulate them accordingly. But, new forms of insurance have been developed that fit uneasily with the formalistic nature of traditional regulatory definitions. Regulations are also characterized by jurisdictional boundaries that limit the scope to which they are applied. However, the integration of insurance markets and their interconnection with other sectors of the financial system has put into question the current jurisdictional structure of insurance regulation, which is highly fragmented at both the domestic and international levels.

Regulatory activities following the 2008 Crisis, as manifested in Dodd-Frank and various international initiatives, have added urgency to the two boundary problems because they represent tentative first steps towards redrawing regulatory boundaries governing insurance, which may or may not serve as the basis for further-reaching reforms. This Article targets a gap in the law literature, which has been slow to recognize the implications of these regulatory and economic changes in insurance. Legal scholarship has also failed to update a prior literature that examined the convergence between financial services industries, which was concerned with efficiency gains from the merger activity of the 1990s rather than the threats to systemic stability presented by the latest generation of financial innovation.

In applying the boundary problem framework to insurance, this Article comes to two general conclusions that are in tension with the current thrust of policy and/or the literature. First, with respect to jurisdictional boundaries, the newly established Financial Insurance Office is inappropriately structured to leverage international harmonization agreements into domestic reforms, whereas

the reverse orientation would be more effective. This is because, in the United States, there is a strong case for moving from the current state-centered framework to a system that includes a substantial body of preemptive federal rules, at least in the case of solvency regulation. On the other hand, due to the enforcement and information-scarcity problems attendant to cross-border regulatory cooperation, the desirability of ambitious international rules for insurers is less compelling. Therefore the FIO would be most useful if it was reoriented to prioritize domestic reform, and to only pursue harmonization of a relatively small subset of regulations across countries.

Second, with respect to definitional boundaries, there is a tendency in the literature to reflexively propose more "functional" regulatory categories in response to financial engineering that changes the economic features of products or firms. However, identifying a clear economic commonality across different financial services is insufficient to justify a move to more functional definitions, because there are subtle advantages to retaining a substantial degree of formalism. For example, modifying definitional boundaries to track the economic function of newer products sold by insurance companies—such as credit default swaps and fixed-indexed annuities—would likely lead to a cumbersome and inefficient regulatory treatment relative to the status quo. So too, an approach that broadly imposes the same regulatory standards to systemically-significant insurers as apply to large banks would represent functional overreach. However, a more modest move away from formal definitions may be called for with regard to rules that subject entities categorized as "insurance companies" to certain accounting standards and credit ratings treatments that depart sharply from those used for banks and securities firms.

Insurance is often considered to be a quiet and conservative corner of the financial services industry, and associated with more mundane regulatory issues than those attendant to hedge funds, investment banks, and the like. But in fact, it provides a dramatic case of how financial innovation can present complicated tradeoffs for the design

of regulation. The primary force driving this complexity is the presence of jurisdictional and definitional boundary problems, which are relatively acute in finance and open up a vast role for regulatory arbitrage, the limits of which cannot be estimated with confidence. As a result of this uncertainty, recent proposals for requiring federal agencies to perform rigorously quantitative cost-benefit analysis when formulating financial regulations may not materially improve regulatory outcomes. Although this Article has offered directions for reform in a variety of areas, the primary point is to use insurance as a case study for problems that are endemic to finance in general, and to illuminate the conceptual difficulties that appear in each policy context. Awareness of the tradeoffs implied by the boundary problems of finance is a prerequisite for any balanced inquiry into what steps may be taken to provide regulation that is conducive to a more efficient and stable financial system.